Notice of Preparation of Draft Environmental Impact Report

POSTED MAY 1 2 2010

TOM DALY, CLERK-RECORDER

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By_

To: Agencies, Organizations, and Interested Parties

From: City of Westminster

Subject: Notice of Preparation of a Draft Environmental Impact Report in compliance with Title 14,

Sections 15082(a), 15103, and 15375 of the California Code of Regulations. The City of Westminster is the Lead Agency under the California Environmental Quality Act (CEQA) for the proposed project. The City has prepared an Initial Study and will prepare an Environmental

Impact Report (EIR) for the proposed project identified below:

Project Title: Moran Street Specific Plan

Agencies: The City of Westminster requests your views on the scope and content of the environmental information relevant to your agency's statutory responsibilities in connection with the proposed project, in accordance with California Code of Regulations, Title 14, Section 15082(b). Your agency will need to use the EIR when considering any permit or other approval that your agency must issue for the project.

Organizations and Interested Parties: The City of Westminster requests your comments and concerns regarding the environmental issues associated with adoption of a specific plan.

Project Location: The proposed project is located in the western portion of the City of Westminster in western Orange County. The specific plan area is bound by Bolsa Avenue to the north, Bishop Place to the south, adjacent to a mobile home park to the east (approximately 900 feet west of Bushard Street) and adjacent to retail/light industrial to the west (approximately 124 feet east of Weststate Street).

Project Description: The 20-acre Specific Plan site is fully developed and consists of retail, light industrial, medical, public facility, and residential uses: specifically, bakery/café, restaurants, grocery, small retail, a significant number of auto repair/maintenance shops, a fire station, an active adult condominium community, and a shopping mall. The proposed project consists of the Moran Street Specific Plan and associated general plan amendment (GPA) and zone change (ZC). The Specific Plan would allow for the development of a mix of land uses consisting of retail, office, hotel, residential, and surface and structured parking. The GPA would change the Commercial-General designation to Planned Development. The ZC would change Commercial-Industrial (C-M), General Business (C-2), Light Industrial (M-1), and Residential (R-5 [19–24 dwelling units/acre]) to Specific Plan (SP) and eliminate the Planned Development (PD) and Parking Overlays.

Potential Environmental Effects: The Initial Study completed for the proposed project concluded that air quality, greenhouse gas emissions, noise, and transportation and traffic will be further analyzed in the EIR.

Document Availability: The Initial Study is available for review at the following locations:

- City of Westminster, Planning Division, 8200 Westminter Boulevard, Westminster, CA 92683
- Westminster Library, 8180 13th Street, Westminster, CA 92683
- Westminster City Hall and Westminster City Council Chambers
- The Initial Study is available online at the City of Westminster website http://www.westminster-ca.gov/.

Scoping Meeting: The City will hold a scoping meeting on **May 27, 2010 at 6:30 p.m.** at City Hall Council Chambers, 8200 Westminster Boulevard. Agencies, Organizations, and Interested Parties are welcome to attend and present information that they believe should be addressed in the EIR.

Agency/Public Comments: the City will accept written comments between May 13, 2010 and June 12, 2010. Please indicate a contact person for your agency or organization and send your responses and comments to: Kelvin Parker, Senior Planner, 8200 Westminster Boulevard, Westminster, CA 92683.

Your comments may also be sent by FAX to (714) 899-9660 or by email to kparker@westminster-ca.gov (include the name of the project in the subject heading)

If you require additional information, please contact Kelvin Parker, Senior Planner at (714) 548-3487.

INITIAL STUDY FOR:

MORAN STREET

SPECIFIC PLAN



prepared for:

CITY OF WESTMINSTER

Contact: Art Bashmakian, AICP Planning Manager

prepared by:

THE PLANNING CENTER

Contact: Alice Houseworth, AICP Senior Planner

INITIAL STUDY FOR:

MORAN STREET

SPECIFIC PLAN



prepared for:

CITY OF WESTMINSTER

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CWE-08.0L

APRIL 2010

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1. Introduction

1.1 PURPOSE OF THE INITIAL STUDY

The City of Westminster is proposing to adopt a Specific Plan, general plan amendment, and zone change (proposed project) that would amend the existing land use designations on an approximately 20-acre area of the City. All "projects" within the State of California are required to undergo an environmental review to determine the environmental impacts associated with implementation of the project in accordance with the California Environmental Quality Act (CEQA; Public Resources Code §§ 21000 et seq.). CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of proposed activities and to identify ways to avoid or reduce the environmental effects by requiring implementation of feasible alternatives or mitigation measures. CEQA applies to all California government agencies at all levels, including local, regional, and state agencies, boards, commissions, and special districts. The City of Westminster, as lead agency, is required to conduct an environmental review to analyze the potential environmental effects associated with the proposed project.

The findings in this Initial Study (IS) have determined that an Environmental Impact Report (EIR) is the appropriate level of environmental documentation for evaluation of the proposed project. The EIR will be prepared by the City and will include information necessary for agencies to meet statutory responsibilities related to the proposed project. State and local agencies will use the EIR when considering any permit or other approvals necessary to implement the project. A preliminary list of the environmental topics the City has identified for study in the EIR is provided in the IS Checklist (Chapter 3).



1.2 PROJECT SUMMARY

The proposed project consists of the Moran Street Specific Plan, which establishes new general plan land use designations, zoning, and development standards to allow for the development of a mix of land uses—including retail, office, hotel, residential and parking—on a 20-acre site.

A specific plan is a regulatory tool that local governments use to guide development in a localized area and to systematically implement the general plan. Moran Street Specific Plan, to be adopted by ordinance, establishes policy that will guide the redevelopment of the 20-acre site.

This specific plan is intended as a more detailed development plan than the general plan. In compliance with state law (Government Code § 65450 et seq.), the Moran Street Specific Plan includes the following information: (1) the distribution, location, and extent of land uses; (2) the distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities within the project area and required to support the land uses described in the plan; (3) standards and criteria by which development will proceed; (4) a program of implementation measures, including regulations, programs, public works projects, and financing measures necessary to carry out the project; and (5) a statement of the relationship of the Specific Plan to the adopted general plan. The Specific Plan document establishes a framework for the development and guides land use decisions by property owners, builders, City staff, and decision makers.

1. Introduction

The project also includes: (1) a general plan amendment to change the existing Commercial-General designation to Planned Development, and (2) a zone change to change the existing Commercial-Industrial (C-M), General Business (C-2), Light Industrial (M-1), and Residential (R-5) to Specific Plan.

1.2.1 Project Objectives

The Specific Plan would implement the objectives and policies of the City's general plan, redevelopment strategy, and other applicable planning programs. The following objectives have been established for the Moran Street Specific Plan project and will help the public, agencies, and decision makers in their review of the project alternatives and associated environmental impacts:

- Create a cultural activity center and tourist destination;
- Encourage a diverse mix of uses;
- Minimize conflicts between pedestrians and vehicles;
- Provide an adequate supply of parking spaces that are easily accessible;
- Incorporate gathering spaces, plazas, and public amenities as prominent features of new development.

2.1 PROJECT LOCATION

The proposed project is located in the western portion of the City of Westminster in western Orange County (see Figure 1, *Regional Location*). Westminster is bordered by Seal Beach to the west, Garden Grove to the north and east, and Huntington Beach and Fountain Valley to the south. Major roadways in the area include Bolsa Avenue to the north, Magnolia Street to the west, Edinger Avenue to the south, and Brookhurst Street to the east. The San Diego Freeway (Interstate 405) is approximately 1.5 miles southwest, and the Garden Grove Freeway (State Route 22) is 1.5 miles north (see Figure 2, *Local Vicinity*).

The Specific Plan area encompasses approximately 20 acres, bounded by Bolsa Avenue to the north, Bishop Place to the south, retail/light industrial uses to the west, and residential to the east. Figure 3, *Land Use Map*, shows the proposed project site boundaries.

2.2 PHYSICAL ENVIRONMENTAL SETTING

The project site is in the Little Saigon Community Planning Area (CPA) (Westminster General Plan 1996). Little Saigon is a dynamic cultural enclave and home to the country's most concentrated population of Vietnamese residents and business owners. Over the past 30 years, the Little Saigon district in Westminster has evolved into the social center for the Vietnamese community and a distinctive tourist destination that draws visitors from across the country. Properties along Bolsa Avenue in the general vicinity of Moran Street and the Asian Garden Mall are widely regarded as the heart of Little Saigon.



2.2.1 Existing Conditions

Land Use

The Specific Plan area encompasses 25 parcels with multiple owners and consists of retail, light industrial, medical, public facility, and residential uses. Existing land uses along the west side of Moran Street include: bakery/café; restaurants; grocery; small retail such as garden, fabric, and cabinet stores; medical office; a fire station (Orange County Fire Authority Fire Station No. 66); and a significant number of auto repair/maintenance shops. Existing land uses along the east side of Moran Street include: bakery/café, small retail, and Saigon Villas active adult community (144 condominiums, age restricted to 55 and older). The Asian Garden Mall is surrounded on three sides by surface parking and is located between Bolsa Avenue on the north and Bishop Place to the south. Existing land uses are shown in Figures 4a and 4b, *Site Photographs*. Approximately 298,730 square feet of commercial retail building space currently exists on the project site (including the approximately 135,700-square-foot Asian Garden Mall).

Circulation and Parking

Bolsa Avenue is a major six-lane, east-west roadway, providing the main access to the project site from the local community and the surrounding neighborhoods. Bishop Place provides access along the southern boundary of the project site. Moran Street and the Asian Garden Mall drive aisle through the parking lot are the two main north-south connections between Bolsa Avenue and Bishop Place within the project site. East-

west vehicle circulation is provided along Plaza Way—currently located on private property—approximately midblock on Moran Street. Offsite pedestrian access is provided along the northern boundary of the project site. Within the project site, pedestrian walkways and sidewalks are very limited and sometimes nonexistent along Moran Street. Areas with sidewalks and pedestrian walkways include Bolsa Avenue, Bishop Place, and areas adjacent to the Asian Garden Mall.

Individual parking lots are located in front of or between buildings. Moran Street has limited designated parking spaces; the largest parking lot is behind the Asian Garden Mall.

2.2.2 Surrounding Land Use

Surrounding land uses include (see Figure 3):

- North: across Bolsa Avenue is the Asian Village shopping center with restaurants, retail stores, service centers, offices, and a supermarket.
- East: Bolsa Verde Estates Mobile Home Park. A six-foot-high block wall separates the mobile homes from the project site.
- South: single-family residential uses along Coronet Avenue. These homes back up to Bishop Place and are separated from the street by a six-foot-high block wall.
- West: retail/light industrial businesses along both sides of Weststate Street; uses include small retail, restaurant, bakery/café, and several auto repair/maintenance shops. The alley behind the businesses on the east side of Weststate Street is directly adjacent to the project site; the northeast parcel has no alley.

2.3 PROJECT DESCRIPTION

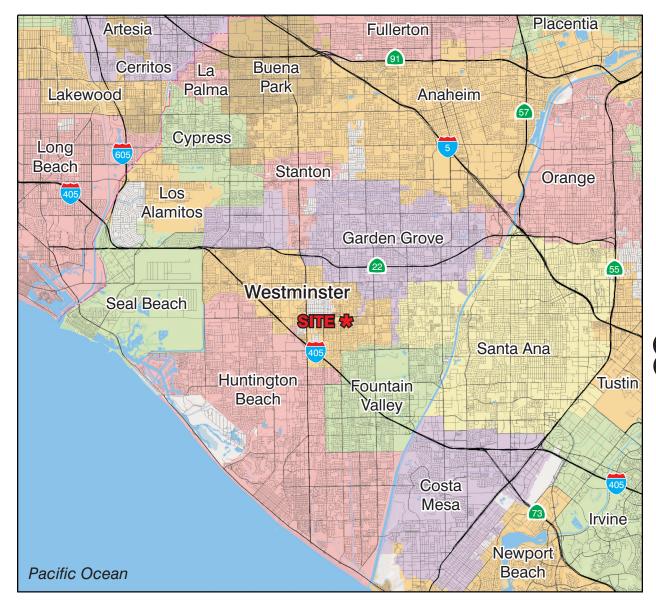
The proposed project consists of the Moran Street Specific Plan, which establishes development standards for proposed retail, office, hotel, residential, and parking uses on the 20-acre site. The project also includes a general plan amendment and zone change (see Section 2.5).

2.3.1 Mixed-Use Planning Concept

The provisions of the Moran Street Specific Plan provide flexibility in the land uses that are permitted in the project site, allowing uses to change over time depending on market conditions. An example would be that the Specific Plan could accommodate commercial uses in the short term and transition to higher intensity uses in the future without a Specific Plan amendment. Land uses and land use regulations in the Specific Plan have been structured to accommodate a variety of land uses, which can be applied horizontally (on individual properties) or vertically (on multiple stories of a building).

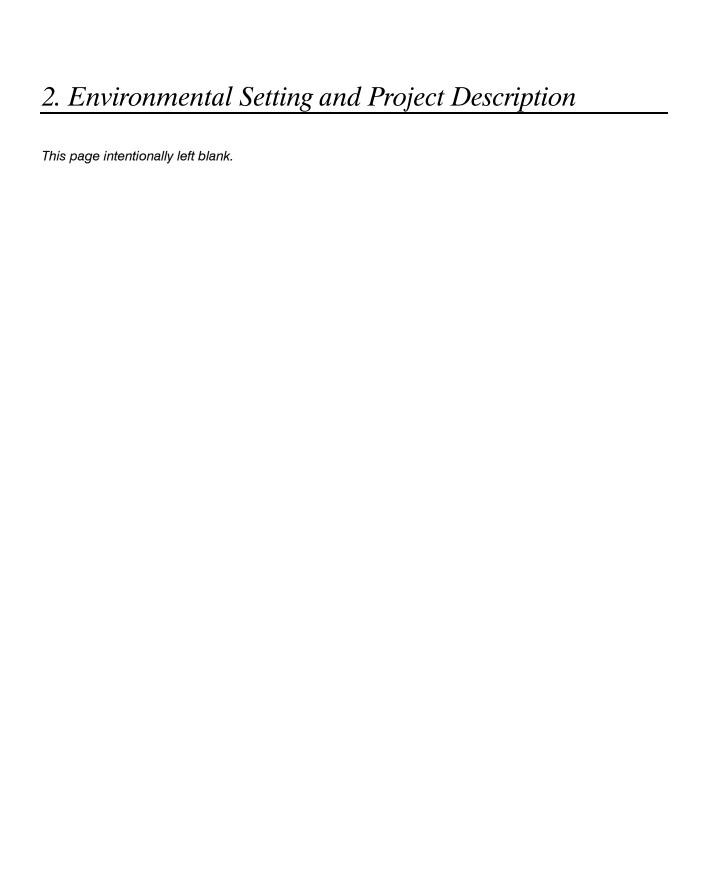
As shown in Figure 5, *Project Site with Planning Areas*, the proposed Specific Plan area is divided into five planning areas. The Specific Plan would allow a mixed-use development concept consisting of retail, office, hotel, residential, and surface and structured parking. The boundaries of the planning areas are approximate and generally follow streets and property lines. Minor changes in boundary alignment and location are permissible with approval by the Community Development Director. However, the intended character of each planning area must be maintained and is discussed in more detail in Section 2.3.2.

Regional Location

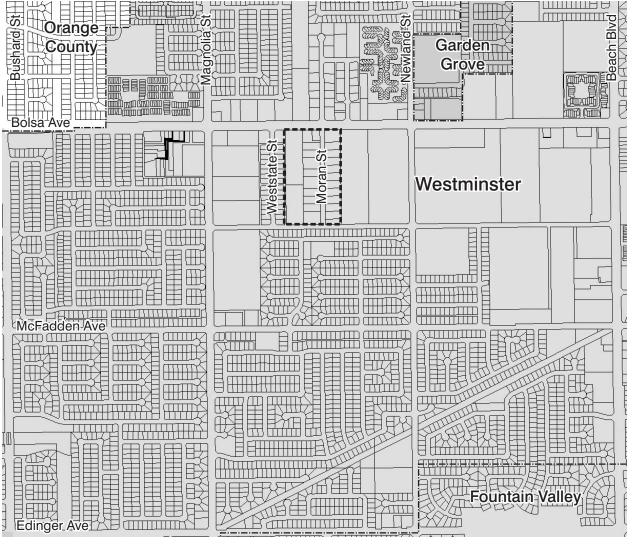








Local Vicinity





---- Site Boundary





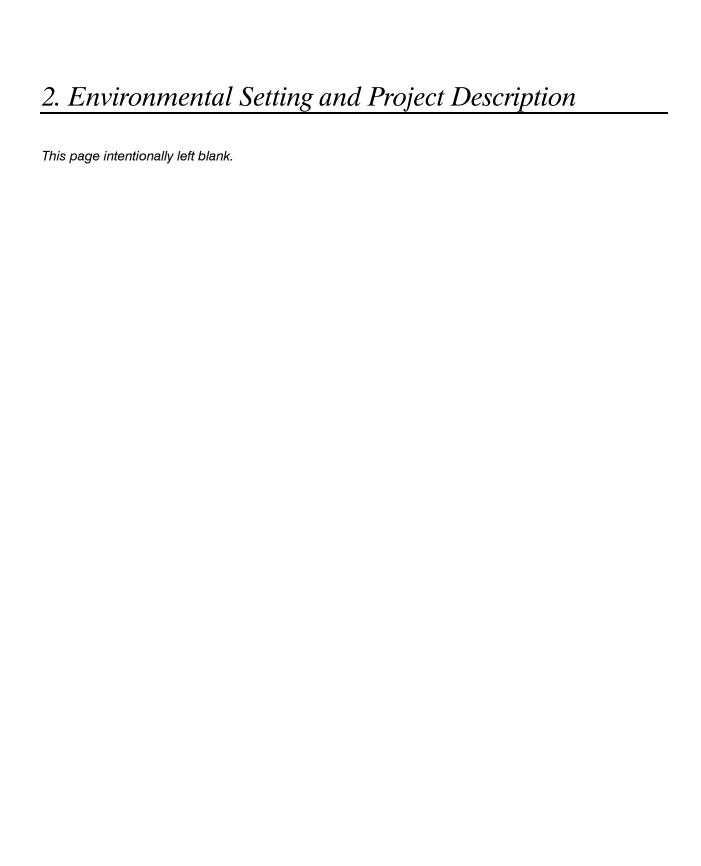
Land Use Map



---- Site Boundary







Site Photographs



Entrance to the Asian Garden Mall off of Bolsa Avenue.



Auto shops along Moran Street.



Site Photographs



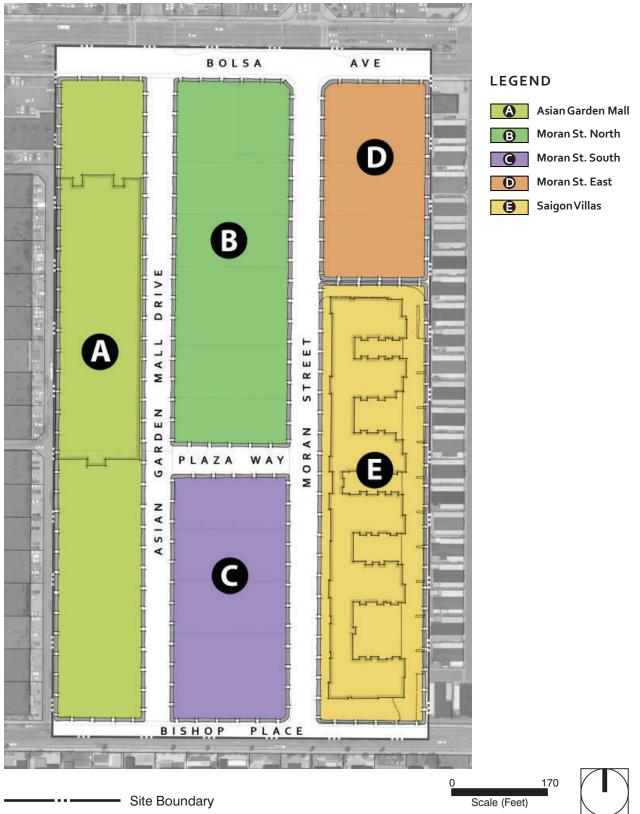
Moran Street looking north from Bishop Place, showing the lack of curb, gutter, and sidewalks in this area.



Parking for Asian Garden Mall north of Bishop Place.



Project Site with Planning Areas



Although the proposed conceptual development plan includes retail, office, hotel, residential, and surface and structured parking, these assumptions are only one example of a development concept that could be developed through the provisions of this Specific Plan and are not meant to limit the amount of development that is permitted on individual parcels. Actual development intensity would be controlled through use of a vehicle trip cap consistent with the proposed zoning. Additional CEQA review may be required if development assumptions change in the future consistent with Section 15162 of the CEQA Guidelines.

Relationship between Land Use and Traffic

The City is concurrently preparing a traffic analysis that will determine the maximum average daily trips (ADT) that can be supported on the surrounding street system. This trip threshold will serve as one of the primary controlling factors of the Specific Plan. Any combination or mix of uses may be developed under the provisions of the Specific Plan so long as the maximum ADT identified for the Specific Plan site are not exceeded.

While ADT will serve as the primary threshold measurement for future development in the Specific Plan area, AM and PM peak hour trip generation will also be evaluated at the time of project submittal for individual development to ensure no additional impacts occur at these peak travel times. This concurrent analysis of AM and PM peak trips is also necessary if a development is large enough to trigger a congestion management program traffic impact analysis; analysis of the AM and PM peak trips will satisfy the county's congestion management program requirements.

Any future changes to the total dwelling units and nonresidential square footage identified in the Specific Plan that would cause the trip thresholds to be exceeded would be required to conduct additional traffic analysis. Development intensity would be controlled through use of a vehicle trip cap consistent with the proposed zoning. ADT for each new land use type would be used to track the thresholds as defined in the Specific Plan. The AM and PM peak hour trip generation analysis would then be used during the analysis process to track project-specific impacts.



2.3.2 Project Characteristics

The Moran Street Specific Plan divides the 20-acre project site into five planning areas based on the location of uses:

- Planning Area A: Asian Garden Mall. Primary retail and entertainment uses centered around the
 existing Asian Garden Mall. The mall occupies the northern half of planning area A with an existing
 one-way private drive, referred to as Asian Garden Mall Drive, located on its east side. Asian Garden
 Mall Drive will become an expanded access drive with sidewalks on both sides, decorative lighting,
 landscaping, benches, kiosk spaces, and other pedestrian amenities. As new development occurs,
 buildings should be located adjacent to and oriented toward the street to create areas of pedestrian
 activity.
 - Asian Garden Mall. Under the Specific Plan design concept, the approximately 135,700-square-foot Asian Garden Mall building would remain in its current configuration and size. The eastern facade of the Asian Garden Mall may be retrofitted to provide direct pedestrian access to mall shops from the Asian Garden Mall Drive (new street). Installation of new doors and windows would provide increased pedestrian activity on the east side of the building.

- Asian Garden Mall Plaza. This plaza is anticipated to consist of a 0.6-acre public open space north of Asian Garden Mall, replacing the surface parking lot located between the Mall and Bolsa Avenue. The plaza would be the central public gathering space for the Moran Street Specific Plan area and a focal point for activity. The plaza would provide areas for outdoor seating and special events and encourage social gathering. The design of outdoor furniture, landscaping, wayfinding signs, lighting, special paving, and artwork would be coordinated with the theme of adjacent development.
- Parking Facility. Due to the demand for additional parking in the area, and to accommodate the increase in vehicular trips associated with the proposed increased development throughout the Specific Plan area, the Specific Plan would allow a freestanding parking structure. Nonresidential land uses would be allowed to participate in shared parking within the structure. Other surface parking would be provided in close proximity to those businesses further from the structure, such as near Moran Street and Bolsa Avenue. The parking structure types permitted by the Specific Plan include:
 - Parking Structure (Exposed). An aboveground parking structure that is fully or partially exposed to the front street on the ground level.
 - Parking Structure (Wrapped Ground Level). An aboveground parking structure
 where nonparking uses are integrated into the ground level of the building along
 the parcel's entire street frontage. The parking structure may be exposed to the
 building's street frontage on upper levels.
 - Parking Structure (Wrapped All Levels). An aboveground parking structure where nonparking uses are integrated into all levels of the building along the parcel's entire street frontage. The parking structure is totally hidden behind nonparking uses.
 - Parking Structure (Partially Subterranean). A parking structure built below the main building mass and partially underground. The parking podium may project above the sidewalk or average finished grade by a maximum of 5 feet.
 - Parking Structure (Subterranean). A fully underground parking structure not visible from the street.
- Planning Area B: Moran Street North. Northern transitional area between the retail and entertainment
 uses in Planning Area A and the residential uses in Planning Area E. Would permit the development
 of a hotel (with a maximum height of 80 feet) and mix of residential and retail uses.
 - Bolsa Avenue/Asian Garden Mall Drive and Bolsa Avenue/Moran Street intersections would function as the primary gateways into the Specific Plan area. Buildings at these two corners would be placed adjacent to and oriented toward the street. The two-way private drive along the southern edge of Planning Area B would be widened to provide a vehicular and pedestrian connection from Moran Street to Asian Garden Mall Drive. This street, Plaza Way, would have expanded sidewalks on both sides, providing space for decorative lighting, landscaping, and street trees. As new development occurs, buildings would be placed adjacent to and oriented toward the streets that surround it, including the north side of Plaza Way.

- Planning Areas B and C combined would allow up to 215 multifamily units as part of the mixed-use development.
- Planning Area C: Moran Street South. Southern transitional area between the retail and
 entertainment uses in Planning Area A and the residential uses in Planning Area E. Would include a
 mix of retail and residential uses in mixed-use buildings placed adjacent to and oriented toward the
 streets that surround it, including the south side of Plaza Way.
- Planning Area D: Moran Street East. Would include a mix of retail and office uses with buildings
 placed adjacent to and oriented toward Moran Street. The intersection of Bolsa Avenue and Moran
 Street would function as a primary gateway into the Specific Plan area.
- Planning Area E: Saigon Villas. Existing residential is a 4 ½-story, 144-unit, age-restricted (55 plus) condominium development.

For purposes of CEQA review, a development concept has been prepared to illustrate the types of uses that could be developed pursuant to the Specific Plan. As shown in Table 1, this development concept would allow for the development of 313,680 square feet, including 275,280 square feet of retail, restaurant, and entertainment; 38,400 square feet of office space; and 359 residential units within the 20-acre site. Two major components of the Specific Plan include land uses that were recently constructed on the site and are not likely to change in the near future: the Asian Garden Mall, and the Saigon Villas. Although the proposed Specific Plan project site consists of a total of 20 acres, only 16 acres of the site would likely be redeveloped with new land uses for the foreseeable future.

Table 1

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Specific Plan Summary									
Planning Area	Total Acres	Retail (Square Feet)	Office (Square Feet)	Hotel (Rooms)	Residential (Units)				
A - Asian Garden Mall (includes 0.6 ac. plaza and parking structure)	4.8	135,680	С	-	-				
B - Moran Street (North of Plaza Way) (includes hotel, retail, and residential)	3.6	46,000 (including 20,000 Banquet)	16,000	120	150				
C - Moran Street (South of Plaza Way) (includes retail and residential)	2.4	40,000	-	-	65				
D – Moran Street (East of Moran Street) (includes retail and office)	1.8	33,600	22,400	-	-				
E – Saigon Villas	4.0	-	-	-	144				
Roads/sidewalks	3.5								
Total	20	275,280	38,400	120	359				

The 4.0-acre Saigon Villas is included within the project site boundary and is part of the proposed general plan amendment and zone change, but it is assumed it will not be redeveloped as part of the proposed development concept. This parcel is the northeast corner of Bishop Place and Moran Street (identified in the Specific Plan as Planning Area E) and would remain in its current physical condition. For the purpose of the CEQA analysis it is included as an existing land use, not a new land use.

The Asian Garden Mall is also included within the project site boundary and is part of the proposed general plan amendment and zone change. The existing 135,680-square-foot building would remain onsite and it is assumed it will not be redeveloped as part of the proposed development concept. This building is on the western edge of the site in the northern part of Planning Area A and would remain in its current physical condition. For the purpose of the CEQA analysis it is included as an existing land use, not a new land use.

Table 1 land use assumptions for a mix of retail and office square footage, hotel rooms, and residential units illustrated in this concept plan are analyzed in this Initial Study; however, these assumptions are only one example of a concept that could be developed through the provisions of the Specific Plan and are not meant to limit the amount of development that is permitted on individual parcels. Future development projects within the Specific Plan area may deviate from these uses and square footage assumptions provided that the thresholds for ADT are not exceeded. Table 2 shows the development assumptions, including increases from existing, for purposes of the EIR analysis.

Table 2
Proposed Net Development

	Exis	ting	Proposed Increa			Increase		
Planning Area	SF	Units	SF	Hotel Rooms	Units	SF	Hotel Rooms	Units
A - Asian Garden Mall	135,680	-	135,680	-	-	-	-	-
B - Moran Street North	80,250	-	82,000	120	150	1,750	120	150
C - Moran Street South	49,200	-	40,000	-	65	-9,200	-	65
D – Moran Street East	33,600	-	56,000	-	-	22,400	-	-
E – Saigon Villas	-	144	-	-	144	-	-	-
Subtotal	298,730	144	313,680	120	359	14,950	120	215

Notes: The land uses listed above are development assumptions for purposes of the CEQA analysis. Actual development intensity will be controlled through use of a vehicle trip cap consistent with the proposed zoning. Additional CEQA review may be required if development assumptions change in the future consistent with Section 15162 of the CEQA Guidelines.

As shown in Table 2, the Specific Plan would allow for redevelopment of the existing industrial uses, resulting in an additional 14,950 square feet of nonresidential development, 120 hotel rooms, and an additional 215 residential units.

2.3.3 Circulation Plan

The onsite traffic and pedestrian circulation system would be organized into public and private roadways and pedestrian walkways. Bolsa Avenue, Bishop Place, and Moran Street would be public roadways, and Asian Garden Mall Drive and Plaza Way would be private roadways. All streets would include a wide public realm (setback) that include a frontage zone between the building façade and the sidewalk for outdoor dining, plaza space, or landscaping, and a wide pedestrian zone for sidewalk. All streets would comply with the Americans with Disabilities Act regulations and Orange County Fire Authority (OCFA) standards. Private streets would be maintained by the property owner or through a property owner's association.

Public streets within the Specific Plan (SP) site include Bolsa Avenue (south side), Moran Street, Bishop Place (north side); private streets include Plaza Way vehicle and pedestrian connection between the east and west portions of the site, and Asian Garden Mall Drive (current drive aisle through the parking lot).

2.3.4 Project Phasing

It is anticipated that redevelopment along the west side of Moran Street (primarily north of Plaza Way) will constitute the initial phase of redevelopment within the Specific Plan project development. Phase 2 would develop the central area of the site (Planning Area A – Asian Garden Mall), and Phase 3 would involve the remaining commercial uses (Planning Areas C and D) as properties in this area slowly change ownership over time. It is anticipated that completion of the latter two phases would take place as market conditions dictate.

2.4 EXISTING GENERAL PLAN AND ZONING

General Plan Land Use Designations

General plan land use designations on the project site include Commercial-General and Planned Development (PD) (Westminster General Plan 1996). The Commercial-General designation provides for all facets of retail and wholesale commercial activity. Commercial uses within the PD designation may exceed this intensity so long as the applicant can demonstrate compliance with the performance standard goal provisions.

The PD designation provides for mixed-use or single-use development based on performance standard goals. Each designated site has a goal that guides development potential as well as use type. FARs and density limits may be exceeded in the PD District so long as compliance with performance standard goal provisions is demonstrated. The performance standard goal requires a traffic analysis to ensure that the ADT for vehicular traffic do not adversely impact the City's roadways. Projects that meet the minimum site area criteria in the zoning code but desire to develop according to the general plan development intensities for the site are required to process a zone change application.



The site is also located within a CPA Overlay that "provides for the implementation of detailed urban design standards for defined areas within the City." The Little Saigon CPA has special provisions related to the type and maximum square footage of uses, and allows for commercial and industrial uses; residential uses are not permitted on the west side of Moran Street. Uses such as a hotel complex, visitor center, cultural arts center, and educational/institutional center are desired within the CPA.

Zoning designations

Zoning designations for the project site include Commercial-Industrial (C-M), General Business (C-2), Light Industrial (M-1), and Residential (R-5). There is also a Parking (P) Overlay on the Saigon Villas parcel and a PD Overlay on the Asian Garden Mall parcels.

C-M zoning allows for office, restaurant, auto repair, and other similar uses and is predominantly designated on properties adjacent to Bolsa Avenue and Moran Streets. Uses permitted in the C-M zone include a) all uses permitted in the C-2 zone, provided the property is developed as a planned unified shopping center, and b) all uses permitted in the M-1 zone, provided that if any portion of the property is developed for commercial uses not permitted by the M-1 zone, compatibility of commercial and industrial. The entire Asian Garden Mall, including the parking area adjacent to Bishop Place, is designated as C-M. The maximum building height is not permitted to exceed the width of the widest street it fronts if developed as a shopping center; otherwise, the height restriction is the same as M-1 (shopping center buildings that front Bolsa Avenue have a height limit of 120 feet, buildings that front Moran Street and Bishop Place have a height limit of 60 feet).

- C-2 zoning allows for business and service retail, office, auto sales, and other similar uses. The
 northeast corner of Moran Street and Bolsa Avenue is designated C-2. The maximum building height
 is not permitted to exceed the width of the widest street it fronts (buildings that front Bolsa Avenue
 have a height limit of 120 feet, and those that face Moran Street 60 feet).
- M-1 zoning allows auto repair, light manufacturing, and self-storage uses. The majority of properties
 on the west side of Moran Street are designated M-1. The maximum building height limit is two
 stories, and not to exceed 35 feet.
- R-5 zoning allows for single-family, duplex, and condominium/townhome uses. The Saigon Villas project is zoned R-5 and is the only residential zoning on the project site.
- The P District allows for residentially zoned properties to be used for open-air, temporary parking of automobiles, provided that the parking does not interfere with the full and complete use of adjacent areas for parking (Chapter 17.38 P Parking District).
- The PD District is an overlay district. Notwithstanding any other provisions of the city municipal code, land zoned in any district may also be classified in the PD District to provide for site plan review and the grouping of compatible uses (Chapter 17.42 PD Planned Development District).

2.5 CITY ACTION REQUIRED

The discretionary actions necessary to implement the proposed project by the City of Westminster include the following.

Moran Street Specific Plan

As provided in California Government Code, Section 65450, the Moran Street Specific Plan has been prepared for the systematic implementation of the updated general plan. In accordance with Section 65450, a specific plan is a regulatory document that provides standards and criteria for the development of a particular geographic area. The Moran Street Specific Plan establishes the planning concept, design and development guidelines, administrative procedures, and implementation measures necessary to achieve the orderly and compatible development of the project site. It is also intended to maintain consistency with and carry out the goals, objectives, and policies of the City of Westminster General Plan. The proposed action is the adoption of the Moran Street Specific Plan, as authorized by Government Code, Title 7, Division 1, Chapter 3, Article 8, Sections 65450 through 65457. The provisions of the Specific Plan would supersede the provisions contained in the Westminster Zoning Ordinance.

General Plan Amendment

To implement the proposed project, a general plan amendment would designate the entire site as Planned Development. Current general plan land use designations on the project site include Commercial-General and Planned Development (see Figure 6, *General Plan Land Use Designations*). The project would change the Commercial-General designations to Planned Development and update the existing Planned Development designation to reflect new performance standards (includes update to maximum vehicle trips and methodology using the revised square footage and permitted uses), and to permit residential land uses.

Additionally, the Little Saigon CPA would be revised to reflect new acreages, establish trip generation thresholds, and permit a mix of uses including residential.

Zone Change

The project site is currently zoned Commercial-Industrial (C-M) some with a PD overlay, General Business (C-2), Light Industrial (M-1), and Residential (R-5 [19–24 dwelling units/acre]) with a Parking Overlay. The proposed project would change these zones to Specific Plan (SP) (see Figure 7, *Zoning Designations*). Parking and PD overlay zones would also be eliminated with the SP zoning.

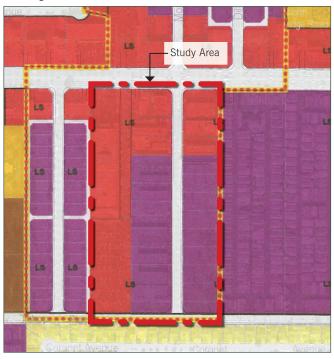
The SP designation is established to provide a zone for property that is subject to a specific plan adopted in accordance with the provisions of the California Government Code and the zoning ordinance. The zone recognizes the detailed and unique nature of specific plans and the need to ensure that development conforms to the uses, development standards, and procedures contained in specific plans. The SP zone may be established for an area concurrently or following the adoption of a specific plan.

The Specific Plan would be adopted by ordinance and the zoning map would be amended to reclassify the area as a Specific Plan. The provisions of the PD overlays appropriate for the Specific Plan site have been incorporated into the Specific Plan; therefore, this overlay designation would be removed. The Parking District would also be eliminated because it currently allows for a residentially zoned property to be used for open-air, temporary parking, and the development of Saigon Villas precludes this type of parking.



General Plan Land Use Designations

Existing General Plan Land Use



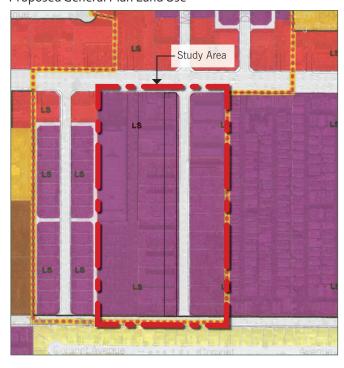
LEGEND

Commercial-general
Planned Development

LS Little Saigon Community Planning Area



Proposed General Plan Land Use



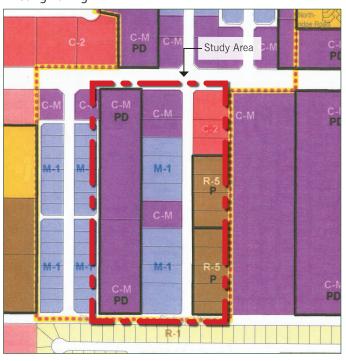
Site Boundary





Zoning Designations

Existing Zoning



LEGEND

(C-2) (General Business)

(C-M) (Commercial-Industrial)

(M-I) (Light Industrial)

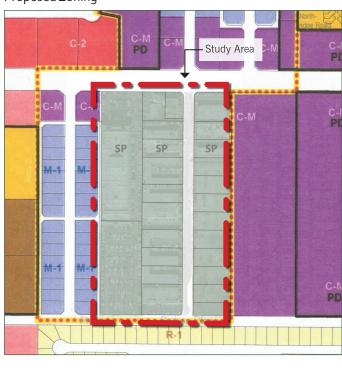
(R-5) (Residential, 19-24 units/acre)

(PD) (Planned Development Overlay)

(P) (Parking Overlay)



Proposed Zoning



LEGEND

Specific Plan





Site Boundary

3. Environmental Checklist

3.1 BACKGROUND

1. Project Title: Moran Street Specific Plan

2. Lead Agency Name and Address:

City of Westminster
Community Development Department – Planning Division
8200 Westminster Boulevard
Westminster, CA 92683

3. Contact Person and Phone Number:

Art Bashmakian, AICP, Planning Manager (714) 548-3247

4. **Project Location:** The Moran Street Specific Plan project site is located within the City of Westminster in Orange County, California. The approximately 20-acre site is located on the south side of Bolsa Avenue between Magnolia and Brookhurst, in the heart of Little Saigon.



5. Project Sponsor's Name and Address:

City of Westminster Community Development Department – Planning Division 8200 Westminster Boulevard Westminster, CA 92683

- 6. General Plan Designation: Commercial-General and Planned Development
- 7. **Zoning:** Commercial-Industrial (C-M), General Business (C-2), Light Industrial (M-1), and Residential (R-5 [19–24 dwelling units/acre])
- 8. Description of Project: The proposed project consists of the Moran Street Specific Plan and associated general plan amendment (GPA) and zone change (ZC). The Specific Plan would allow for the development of a mix of land uses consisting of retail, office, hotel, residential, and surface and structured parking. The GPA would change the Commercial-General designation to Planned Development. The ZC would change Commercial-Industrial (C-M), General Business (C-2), Light Industrial (M-1), and Residential (R-5 [19–24 dwelling units/acre]) to Specific Plan (SP) and eliminate the Planned Development (PD) and Parking Overlays.
- 9. Surrounding Land Uses and Setting: North: Bolsa Avenue and Asian Village shopping center; South: Bishop Place and single-family residential; East: residential (mobile home park); West: retail/light industrial. Setting: The 20-acre Specific Plan site has 25 parcels with multiple owners. The site is fully developed and consists of retail, light industrial, medical, public facility, and residential uses: specifically,

bakery/café, restaurants, grocery, small retail, a significant number of auto repair/maintenance shops, a fire station, Saigon Villas active adult condominium community, and the Asian Garden Mall.

- **10. Other Public Agencies Whose Approval Is Required** (e.g., permits, financing approval, or participation agreement):
 - Santa Ana Regional Water Quality Control Board (MS-4 permit for Municipal Stormwater Permitting)
 - State Water Resources Control Board (General Construction Activity Stormwater Permit)
 - California Regional Water Quality Control Board (Permit for possible dewatering during construction; and National Pollutant Discharge Elimination System permit)
 - Orange County Flood Control Division (Review and approval of hydrology/drainage and storm drain facility plans)
 - South Coast Air Quality Management District (Construction-related air permits)
 - Orange County Fire Authority (emergency access approval)

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

	onmental factors checked at is a "Potentially Signific			•		project, involving at least one on the following pages.
	Aesthetics Biological Resources Greenhouse Gas Emissions Land Use and Planning Population and Housing Transportation and Traffic		Agriculture and Forest Resou Cultural Resources Hazards and Hazardous Mate Mineral Resources Public Services Utilities and Service Systems	erials		Air Quality Geology and Soils Hydrology and Water Quality Noise Recreation Mandatory Findings of Significance
3.3 D	ETERMINATION					
On the ba	asis of this initial evaluatio	n:				
	find that the proposed pr E DECLARATION will be	•		gnificant e	ffect	on the environment, and a
not be a s		se be	ecause revisions in the p	roject hav	e bee	n the environment, there will en made by or agreed to by red.
	find that the proposed IMENTAL IMPACT REPO			cant effec	t on	the environment, and an
unless mi earlier doo based on	tigated" impact on the encument pursuant to applic	viron able scrib	ment, but at least one ef legal standards, and 2) hed on attached sheets.	fect 1) has nas been ad An ENVIRO	beer ddres DNM	ct" or "potentially significant n adequately analyzed in an ssed by mitigation measures ENTAL IMPACT REPORT is
all potent DECLARA earlier EIF	tially significant effects (ATION pursuant to applica	a) h able s TION	ave been analyzed ad standards, and (b) have I, including revisions or r	equately in been avoid	n an ded c	n the environment, because earlier EIR or NEGATIVE or mitigated pursuant to that sures that are imposed upon
Signatur	e			Date		
Printed N	Name			For		



3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analyses Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify the significance criteria or threshold, if any, used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significant.

	Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	AESTHETICS. Would the project:				
a)	Have a substantial adverse effect on a scenic vista?				X
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				Х
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?			Х	
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	
II.	AGRICULTURE AND FOREST RESOURCES. W	ould the project			
a)	In determining whether impacts to agricultural resources are significal Agricultural Land Evaluation and Site Assessment Model (1997) prepassessing impacts on agriculture and farmland. In determining whether environmental effects, lead agencies may refer to information compile the state's inventory of forest land, including the Forest and Range Accarbon measurement methodology provided in Forest Protocols adoption Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring	pared by the Califorr ner impacts to fores ed by the California ssessment Project a	nia Dept. of Conservation t resources, including Department of Forestr and the Forest Legacy	on as an optional me timberland, are sign y and Fire Protection Assessment project	odel to use in ificant n regarding
b)	Program of the California Resources Agency, to non- agricultural use? Conflict with existing zoning for agricultural use, or a				
	Williamson Act contract?				X
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				x
d)	Result in the loss of forest land or conversion of forest land to non-forest use?				X
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X
III.	AIR QUALITY. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	Х			
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Х			
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	Х			



	Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Expose sensitive receptors to substantial pollutant concentrations?	Х			
e)	Create objectionable odors affecting a substantial number of people?			X	
IV.	BIOLOGICAL RESOURCES. Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				Х
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
٧.	CULTURAL RESOURCES. Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?			Х	
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?			Х	
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d)	Disturb any human remains, including those interred outside of formal cemeteries?			X	
VI.	GEOLOGY AND SOILS. Would the project:				
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				

	Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
	 Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. 			X	
	ii) Strong seismic ground shaking?			X	
	iii) Seismic-related ground failure, including liquefaction?			X	
	iv) Landslides?				Х
b)	Result in substantial soil erosion or the loss of topsoil?			X	
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
VII	. GREENHOUSE GAS EMISSIONS. Would the proj	ect:			
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Х			
b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Х			
VII	I. HAZARDS AND HAZARDOUS MATERIALS. v	Vould the project	:		
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			Х	
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			х	
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	



	Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				x
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			х	
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
IX.	HYDROLOGY AND WATER QUALITY. Would the	project:			
a)	Violate any water quality standards or waste discharge requirements?			X	
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site			X	
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e)	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
f)	Otherwise substantially degrade water quality?				Х
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j)	Inundation by seiche, tsunami, or mudflow?				Х

	Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	LAND USE AND PLANNING. Would the project:				-
a)	Physically divide an established community?				Χ
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			х	
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
XI.	MINERAL RESOURCES. Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				Х
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XII	. NOISE. Would the project result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X			
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	X			
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				Х
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				Х
XII	I. POPULATION AND HOUSING. Would the project				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X



	Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XI۱	/. PUBLIC SERVICES. Would the project:				
	result in substantial adverse physical impacts associated wit need for new or physically altered governmental facilities, the impacts, in order to maintain acceptable service ratios, responservices:	construction of v	which could cause s	ignificant environ	mental
a)	Fire protection?			X	
b)	Police protection?			X	
c)	Schools?			X	
d)	Parks?			X	
e)	Other public facilities?			X	
ΧV	. RECREATION. Would the project:				
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			Х	
b)	Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			Х	
ΧV	I. TRANSPORTATION AND TRAFFIC. Would the	project:			
a)	Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	X			
b)	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	х			
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				Х
e)	Result in inadequate emergency access?				Χ
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

	Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV	II. UTILITIES AND SERVICE SYSTEMS. Would the	ne project:			
a)	Exceed waste water treatment requirements of the			X	
	applicable Regional Water Quality Control Board?				
b)	Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			Х	
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?			Х	
e)	Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			Х	
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			Х	
g)	Comply with federal, state, and local statutes and regulations related to solid waste?			Х	
XV	III. MANDATORY FINDINGS OF SIGNIFICANCI	Ē.			
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	X			
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X			



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Section 3.4 provided a checklist of environmental impacts. This section provides an evaluation of the impact categories and questions contained in the checklist.

4.1 AESTHETICS

a) Have a substantial adverse effect on a scenic vista?

No Impact. The proposed project would not have an adverse effect on scenic vistas. Vistas provide visual access or panoramic views to a large geographic area. The field of view from a vista location can be wide and extend into the distance. Panoramic views are usually associated with vantage points looking out over a section of urban or natural areas that provide a geographic orientation not commonly available. Examples of panoramic views might include an urban skyline, valley, mountain range, the ocean, or other water bodies. There are no scenic vistas on or near the project site. The City's general plan does not identify areas of scenic vistas in the City (City of Westminster 1996). Although the proposed project would have buildings of various heights, possibly up to 80 feet, the proposed project would not obstruct, interrupt, or diminish a valued panoramic view. No project-related scenic vista impacts would occur and no further analysis is required.



b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. No scenic resources would be impacted by the proposed project. The project site and surroundings are developed with roadways and one- and two-story residential and commercial buildings, none of which have been identified as scenic resources (Westminster GP 1996). The few trees and vegetation that exist on the Specific Plan site are ornamental landscape varieties and do not represent a scenic resource.

The site is not located on a state scenic highway. The nearest designated state scenic highway is State Route 2 (Angeles Crest Highway) approximately 35 miles to the north of the proposed project site (Caltrans 2007). The County of Orange has several roadways designated as Landscape Corridor and Viewscape Corridor. The site is not located on any county-designated corridors and there are no scenic highways identified in the City (County of Orange 2005b; City of Westminster 1996). No project-related scenic resource impacts would occur and no further analysis is required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact. The existing visual character of the project area would not be significantly altered by the proposed project. The site is already developed with a mix of retail stores, restaurants, grocery, medical office, a fire station, and a significant number of auto repair/maintenance shops with limited landscaping. The site is located in an urban environment and is surrounded by mixed land uses of varying height and building mass. The immediate area does not have a unifying architectural or design theme and is therefore not considered to have a high quality aesthetic value. Project implementation in accordance with the Specific Plan would likely improve the visual character of the site.

Building Height and Mass

The new buildings would not be consistent with the development standards for C-M, M-1, and C-2 zoning designations (City of Westminster 2010a). Building height restrictions are established to maintain compatibility between land uses throughout the City. Within Planning Area B, a hotel building may be permitted with a maximum height of 80 feet, and other buildings within Planning Areas A, B, C, and D may be up to 60 feet. The existing one- and two-story buildings would be replaced with buildings that would be taller than surrounding development and would have a larger mass and bulk. The larger scale of the Specific Plan design concept is intentional to develop this area as a major focal point for the City. Within the Specific Plan area, construction of the Saigon Villas has already started the conversion to taller, more dense development.

The new development would be set back from the street—20 feet along Bolsa Avenue, 16 to 20 feet along Moran Street, and 30 feet (building facades that are four stories or higher) along Bishop Place. Landscape trees and plantings are required to screen flat building facades from adjacent residential units. Additionally, pedestrian areas would have space for street trees, decorative lighting, landscape planters, and other pedestrian-related amenities.

Aesthetic impacts are highly subjective and may or may not be considered adverse by some members of the community. Although the buildings would be taller and larger than other surrounding buildings, aesthetic impacts are not considered significantly adverse due to the mixed urban setting, larger building setback requirements, building and site design, and increased landscape requirement.

Shade and Shadow

Shading refers to the effect of shadows cast on adjacent areas by proposed structures. These effects are dependent upon several factors, including local topography, the height and bulk of the project's structural elements, sensitivity of adjacent land uses, the season, and the duration of shadow projection.

Shadows are cast westward to eastward as the day advances. Shading of existing sensitive uses, such as routinely used residential outdoor spaces, can occur with the development of new structures south of these uses. Shadows are longest on winter solstice (December) when the sun is lowest in the sky, and shortest on summer solstice (June).¹

A project impact would be considered significant if shadow-sensitive uses would be shaded by project-related structures for more than three hours between the hours of 9:00 AM and 3:00 PM Pacific Standard Time (between early November and mid-March), or for more than four hours between the hours of 9:00 AM and 5:00 PM Pacific Daylight Time (between mid-March and early November).

The Specific Plan would permit buildings up to 60 feet on the east side of Moran Street (Planning Areas D and E) and up to 80 feet between Moran Street and the western edge of the site (Planning Areas A, B, C). Based on the location of existing residential development to the south and east of the Specific Plan site, and the direction of the longest winter shadows from west to east, project-related shadows would fall on three residential parcels. These parcels are within the mobile home park to the east. No shadow-sensitive outdoor

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At 9:00 AM on the winter solstice, shadows project at 45° west of true north. As noon approaches, shadows move closer to true north and shorten in length. After noon, shadows begin to move east and elongate until 3:00 PM, when they project at 45° east of true north. Summer shadows move, shorten and lengthen in the same way throughout the day, except that they project farther south (i.e., 85° from true north during the summer solstice) and reach shorter maximum lengths.

spaces would be shaded for three hours or longer. Therefore, less than significant shadow impacts would occur.

General Appearance

While the general appearance of the proposed project site would change, it would maintain its existing urban character through higher density and greater mix of uses. The Specific Plan would set the standards and comprehensive planning program for cohesive and efficient use of land with common objectives and design principles. Redevelopment of the site in accordance with the Specific Plan is proposed to enhance the visual character of the site. Chapter 3 of the Specific Plan includes design principles that would improve the visual appeal of onsite public areas such as pedestrian walkways, plazas, paseos, streets, and parking lots by making them more pedestrian friendly and human scaled.

Architecture

Because the project site is located within the Little Saigon CPA, the new development should conform with Little Saigon CPA design standards. These standards encourage all new development to "incorporate architectural elements similar to those found on buildings constructed in Vietnam in the early 1900s in the French Colonial tradition." Architectural elements that follow a traditional Chinese architectural theme may also be used. The basic theme includes elements such as large overhanging tile roofs with eave brackets, use of columns and bright accent colors, and smooth-finish stucco exteriors. This architectural style would be compatible with several other buildings within the extended Little Saigon CPA. Therefore, the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings.



Less Than Significant Impact. The proposed project would not include land uses that would substantially increase the amount of light and glare in the project area. The project site is in an urban area and is currently developed with bakery/café, restaurants, grocery, small retail stores, medical office, a fire station, and a significant number of auto repair/maintenance shops. Onsite lighting includes street lights, security lighting on buildings, and storefront signage. The nearest light-sensitive receptors to new project site development are the single-family residences to the south of Bishop Place, approximately 60 feet from the southern project site boundary; the Saigon Villas in the southeast portion of the site; and the mobile home residences to the east, directly adjacent to the eastern project site boundary. The surrounding buildings and streets contain substantial light sources; therefore, the project would not represent a significant impact on area-wide lighting.

The significance of light impacts depends on the proximity to the affected use, the intensity of the light source, and the existing ambient light environment. The proposed specific plan would allow for the development of retail, restaurant, entertainment, hotel, office, and residential land uses. Exterior lighting would include storefront signage, security lighting, walkway lights, building lights, and street lighting. Because of the increased building height and density of uses, lighting on the site would increase. All new fixtures would be equipped with shields to direct lighting away from both the offsite neighboring residences and the onsite residential land uses. The use of proper design and state-of-the-art reflectors and hoods on light sources would substantially reduce the effects from glare and spill light. These shields would also reduce the amount of light being emitted into the night sky. As part of the Specific Plan use of reflective materials on buildings would not be permitted which would significantly reduce the amount of reflective glare on- and offsite. All future project applicants are required to comply with City lighting ordinances and Specific



Plan design standards. Prior to the City design review, the applicants must submit a detailed lighting plan to the City of Westminster Planning Division. Approved lighting would be incorporated into the approved building plans and construction drawings. Compliance with City regulations and design standards would reduce project-related light and glare impacts to less than significant and no further analysis is required.

4.2 AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The proposed project would not impact Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). The California Resource Agency uses the Farmland Mapping and Monitoring Program (FMMP) to maintain an inventory of California's Farmland. The California Department of Conservation publishes maps biannually as part of the FMMP. The project site is designated as Urban and Built-Up Land. There is one area of Prime Farmland and one area of Unique Farmland within one mile of the proposed project site but there is no designated farmland on the project site (CDC 2009b). No farmland impacts would occur and no further analysis is required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The proposed project would not conflict with any agricultural land use or Williamson Act contracts. The Williamson Act applies to parcels consisting of least 20 acres of Prime Farmland or at least 40 acres of farmland not designated as Prime Farmland. The project site is not located within a Prime Farmland designation, nor does it consist of more than 40 acres of farmland. There are currently no agricultural activities and no Williamson Act contracts on the proposed project site. No project-related existing agricultural zoning or Williamson Act impacts would occur and no further analysis is required.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The proposed project would not rezone any forest land, timberland, or timberland production. The project site identified for new development is zoned Commercial-Industrial (C-M), General Business (C-2), and light industrial (M-1). The site is not zoned or used for forest land or timberland. No project-related impacts to forest land or timberland would occur and no further analysis is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed project would not impact forest land. The project site is completely urbanized and has no forested land on or adjacent to the site. The use of the project site would not cause indirect

conversion of forest land to nonforest uses. No project-related impacts to forest land would occur and no further analysis is required.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The proposed project would not impact farmland or forest land. There are no areas of farmland or forest land on or adjacent to the project site, and the use of the project site would not cause indirect conversion of farmland to nonagricultural uses or the removal of forest land. No project-related impacts to farmland or forest land would occur and no further analysis is required.

4.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Potentially Significant Impact. The proposed project would potentially conflict with an applicable air quality plan. The Specific Plan site is in the South Coast Air Basin (SoCAB), which is monitored by the South Coast Air Quality Management District (SCAQMD). The SCAQMD's air quality management plan (AQMP) strategy is based on development projections from local general plans; therefore, the type of projects that may be considered inconsistent with the AQMP include new or amended general plan elements, specific plans, and unique projects. For these projects a consistency review is required. Since this project involves a specific plan and would require revisions to the Westminster General Plan, it may conflict with the AQMP. In addition, project-related construction and operation have the potential to generate substantial quantities of criteria pollutants that could exceed the SCAQMD significance thresholds. The potential for the Moran Street Specific Plan to conflict with or obstruct implementation of the SCAQMD's AQMP will be fully evaluated in the EIR.



b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Potentially Significant Impact. Construction and operation of the proposed project may contribute air pollutant emissions that would violate existing or proposed air quality standards. The SCAQMD has regional emissions significance thresholds for carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), and fine inhalable particulate matter ($PM_{2.5}$). The potential for the Moran Street Specific Plan project to violate SCAQMD standards or contribute substantially to air quality violations will be fully evaluated in the EIR.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Potentially Significant Impact. The proposed project may result in a cumulatively considerable net increase of criteria pollutants in a nonattainment area. The Specific Plan site is in the SoCAB, which is designated nonattainment for O₃, PM₁₀, and PM_{2.5} under both California and federal ambient air quality standards (AAQS) (CARB 2006). However, the SoCAB is proposed to be designated as nonattainment under the state

standards for NO_x and for lead (Los Angeles portion only).² The potential for the Moran Street Specific Plan project to exceed nonattainment air quality standards will be fully evaluated in the EIR.

d) Expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact. The proposed project may expose sensitive receptors to substantial air pollutants. An impact is potentially significant if the project generates concentrations of air pollutants that exceed the California or federal AAQS, thereby exposing sensitive receptors to substantial pollutant concentrations. Sensitive receptors are locations where uses and/or activities result in increased exposure of persons more sensitive to the unhealthful effects of emissions (such as children and the elderly). The nearest sensitive receptors are the single-family homes south of Bishop Place, the Saigon Villas in the southeast portion of the project site, and the mobile homes east of the site. These residences may be exposed to air pollutants generated during construction and project-related traffic. Pollutants may exceed the SCAQMD's localized significance thresholds for carbon monoxide (CO).

Sensitive receptor exposure to substantial pollutant concentrations will be fully evaluated in the EIR.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. The project would not emit objectionable odors that would affect a substantial number of people. The threshold for odor is if a project creates an odor nuisance pursuant to SCAQMD Rule 402, Nuisance, which states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Restaurants are generally not associated with foul odors that constitute a public nuisance. The proposed specific plan would not permit the types of facilities and operations that would generate objectionable odors, therefore operational impacts would be less than significant. No further analysis is required.

During construction activities, construction equipment exhaust, application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary, intermittent in nature, and would not affect a significant number or people. Impacts associated with construction-generated odors would be less than significant and no further analysis is required.

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Based on California Air Resources Board's (CARB) proposed 2010 State Area Designations, which are anticipated to be adopted on March 25, 2010.

4.4 BIOLOGICAL RESOURCES

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The proposed project would not impact any candidate, sensitive, or special status species. Sensitive plant species are those that are candidates or proposed to be listed, or are listed, as threatened or endangered by the US Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG), or considered sensitive species by the California Native Plant Society (CNPS).

Because of its built-up and urban character, no threatened or endangered species are known to occur in the City of Westminster. The vegetation in the City is primarily lawn grasses, ground covers, shrubs, and ornamental trees, and most of the vegetation is in residential, commercial, rights-of-way, and civic, park, and cemetery landscapes (City of Westminster 1996). The project site is completely urbanized and developed with commercial retail and industrial land uses and does not support endangered or threatened species. The project site does not provide habitat to any candidate, sensitive, or special status species. No project-related impacts to species identified by the City or county or by CDFG or USFWS would occur, and no further analysis is required.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The project site is currently developed with commercial retail and industrial land uses and does not support riparian or natural community habitat. The proposed project would have no impacts on riparian or sensitive natural community environments and no further analysis is required.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The proposed project would not affect federally protected wetlands. The project site is entirely built up with commercial retail and industrial land uses. The City of Westminster does not have any significant wetland areas. The proposed project would not involve the removal, filling, or disruption of any existing wetland areas. No impacts project-related impacts to federally protected (Section 404) wetlands would occur and no further analysis is required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. The proposed project would not affect migratory or resident species movement or a native wildlife nursery site. The project site does not contain native vegetation and does not support foraging, roosting, or nesting sites. The only area identified as containing migratory habitat in the City is the 160-acre Westminster Memorial Park Cemetery, which affords some habitat for migratory ducks, geese, and wild birds, such as hawks and owls. Additionally, Mile Square Park is approximately one mile southeast of the project site and could support wildlife. No project-related impacts to migratory or native resident fish or wildlife species would occur and no further analysis is required.



e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant Impact. The proposed project would not conflict with local biological ordinances. The proposed project would require the removal of the few existing trees and vegetation. City of Westminster has a street tree ordinance that requires new street trees be planted. Any construction that results as part of the proposed project shall follow the restrictions of the street forestry policy (City of Westminster Ordinance 2335, Section 2. Street Forestry Policy) (City of Westminster Municipal Code, 2002). As part of the Specific Plan project, street trees, landscape planters, shrubs, small oriental-style gardens, ground cover, and accent plantings would be installed throughout the site. Biological impacts would be less than significant and no further analysis is required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. Development of the proposed project would not impair any local Habitat Conservation Plans, Natural Community Conservation Plans, or any other local, regional, or state habitat conservation plans. The project site is completely developed with urban land uses and does not support any natural habitat. There are no conservation plan areas on or near the project site (USFWS 2009). No project-related impacts would occur and no further analysis is required.

4.5 CULTURAL RESOURCES

a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Less Than Significant Impact. The proposed project would not change the significance of a historical resource. CEQA Guidelines Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Resources could include buildings, structures, street lighting systems, spaces, sites, etc. Uses include residential, nonresidential (e.g., commercial, industrial, institutional), and public facilities. Resources may be important individually or as part of a district or grouping of complementary resources. Significant historical resources include those designated or eligible for designation in the National Register of Historic Places (National Register); the California Register of Historical Resources (California Register) or other state program; or as a City Historic Cultural Monument. Historical resources may also include resources listed in the State Historic Resources Inventory as significant at the local level. Generally a resource is considered to be "historically significant" if it meets one of the following criteria:

- i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- ii) Is associated with the lives of persons important in our past;
- iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
- iv) Has yielded, or may be likely to yield, information important in prehistory or history.

The project site consists of 25 parcels. Existing land uses include: restaurants, grocery, retail stores, medical office, a fire station, and a significant number of auto repair/maintenance shops. Buildings within the Specific

Plan area were constructed between 1964 and 2009. Structures at 15081 Moran Street and 15131 Moran Street are the oldest, constructed in 1964. The Asian Garden Mall was constructed in 1986. None of the buildings are identified on any historic registers or in the City general plan as being historic. Onsite parcels do not contain properties that meet the age criterion of 50 years or older to be considered as potentially historic resources. Additionally, these buildings do not contain distinctive architectural characteristics that have high artistic value. Therefore, none of the buildings qualify under CEQA as historically significant, project-related historic impacts would be less than significant, and no further analysis is required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less Than Significant Impact. The proposed project is not anticipated to disturb archaeological resources. The project site is nearly completely covered by buildings and pavement. A cultural resource study was conducted for the four-acre southeast portion of the Moran Street Specific Plan site ("Recirculated Initial Study and Proposed Mitigated Negative Declaration for the Moran Senior Condominiums" [Saigon Villas] Appendix A). Prior to construction of Saigon Villas, no prehistoric or historical archaeological sites were identified on the parcels. During construction of the existing buildings the entire site was cleared and graded; therefore, the discovery of archaeological resources is considered very low. Additionally, the project area appears to have low sensitivity for archaeological resources.

Project construction would involve ground disturbance of portions of the site over several years. During the earth-disturbing activities there is a potential, however slight, to uncover buried archaeological resources. The City of Westminster General Plan provides protection of archaeological resources with policy IIC3-8, which states that projects will immediately stop grading activities if archaeological resources are encountered (City of Westminster 1996). In the event of a discovery of archaeological resources during grading and excavation of the site, a qualified archaeologist would be retained to assess the find and develop a course of action to preserve it. Given compliance with existing regulations and the low sensitivity for archaeological resources, impacts would be less than significant.



c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. The project would not disturb any known paleontological resources or unique geologic features. Paleontological resources are plant and animal fossils dated from 3.5 million to 7,000 years ago. During previous surveys, no paleontological resource sites were found within two miles of the City boundaries (City of Westminster 1996). The City of Westminster General Plan provides protection of paleontological resources with policy IIC3-8, which states that "in order to protect paleontological resources in the City, projects that would involve extensive grading or grading of large areas to depths of more than ten feet below grade should be conditioned to immediately stop grading activities if paleontological or archaeological resources are encountered" (City of Westminster 1996). The Specific Plan anticipates an aboveground parking garage, but permits several types of structure, including a subterranean garage. Future project applicants are required to comply with City regulations for all below-grade excavation. The City requires a qualified paleontologist to investigate the site if resources are discovered during site excavation. Compliance with the City's general plan policy would reduce project-related paleontological resource impacts to less than significant.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. Project-related construction is not anticipated to uncover human remains. "Human remains" includes both burials and cremations. The 160-acre Westminster Memorial Park Cemetery is located approximately 1.5 mile southwest of the project site. However, no human remains, including those

in formal cemeteries, were identified on the project site. During construction of the existing buildings the entire site was cleared and graded and no human remains were discovered; therefore, the risk of discovering human remains is considered negligible. However, if human remains of Native American origin are discovered during project construction, compliance with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resource Code Sec. 5097), will be maintained. If any human remains are discovered or recognized in any location other than a dedicated cemetery, the contractor is required to ensure that excavation or disturbance of the site (including any nearby area reasonably suspected to overlie adjacent human remains) shall stop until:

- 1) The coroner of the county has been informed and has determined that no investigation of the cause of death is required; and
- 2) If the remains are of Native American origin,
 - a) the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
 - b) the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American.

Compliance with the Health and Safety Code would reduce any impacts to discovered human remains to a less than significant level.

4.6 GEOLOGY AND SOILS

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. The proposed project would not be subject to substantial adverse effects caused by the rupture of nearby earthquake faults. The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. Surface rupture is the most easily avoided seismic hazard. The primary purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the construction of buildings used for human occupancy on an active fault line. Unlike damage from ground shaking, which can occur at great distances from the

fault, impacts from fault rupture are limited to the immediate area of the fault zone where the fault breaks along the surface.

There are no known active fault systems located within the City limits; therefore, no part of the City of Westminster has been designated under the Alquist-Priolo Act as a Special Study Zone (City of Westminster 1996). Additionally, the City of Westminster is not listed on the California Department of Conservation, Division of Mines and Geology's list of cities affected by Alquist-Priolo Earthquake Fault Zones (CDC 1999). No fault rupture impacts would occur and no further analysis is required.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The project could expose people and structures to potential impacts associated with seismic ground shaking. The expected ground motion characteristics of future earthquakes in the region will depend on the characteristics of the generating fault, the distance to the epicenter, the magnitude of the earthquake, and the site-specific geologic conditions. Ground shaking of moderate to severe intensity may be expected in the City from any of the seven major fault zones: San Andreas, Newport-Inglewood, Sierra Madre, Cucamonga, Whittier-Elsinore, San Jacinto, or San Fernando (Westminster 1996). The most likely source of a strong seismic movement within the region would be a major earthquake on the San Andreas Fault located approximately 46 miles to the northeast. Other potentially active local fault systems that could also affect the City and the project site are the Newport-Inglewood Fault Zone approximately 5 miles southwest and the Whittier-Elsinore Fault Zone approximately 16 miles north.

Westminster is underlain by poorly consolidated alluvial deposits and is located in Zone C, a region of greatest shaking in the Orange County area (Westminster 1996). All proposed structures would be constructed in accordance with applicable building codes and standards. The most recent building standard adopted by the legislature and used throughout the state is the 2007 version of the California Building Code (CBC) (Title 24, Part 2, California Code of Regulations), often with local, more restrictive amendments based upon local geographic, topographic, or climatic conditions. These codes provide minimum standards to protect property and the public welfare by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability. Additionally, the CBC requires the preparation of projectspecific geotechnical/engineering reports by a Certified Engineering Geologist and/or Geotechnical Engineer prior to construction of the proposed structures. Each future component of this Specific Plan project is required to comply with the recommendations contained in these reports. Any structures built for this project would adhere to the most recent version of the CBC. Project plans would be reviewed during the plan check process, which would ensure that these measures are incorporated. Seismic ground shaking impacts would be less than significant and no further analysis is required.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact. The proposed project is in an area that is susceptible to seismically induced liquefaction (CDC 1997a). Liquefaction tends to occur in areas with high water tables. Liquefaction is the temporary transformation of a soil or sediment to a fluid mass and is initiated by ground shaking, such as from earthquakes. Soils and sediments most susceptible to liquefaction are low cohesion silty or sandy materials that are saturated by groundwater within 50 feet of the surface. However, other sediments, such as some gravelly and some cohesive materials, may also be subject to



liquefaction (CDC 1997b). Soils/sediments that are liquefied result in a loss of support for structures, utilities, and paving.

The project site is located in a designated liquefaction zone (CDC 1997a). Additionally, the City's general plan designates the project site as having High Liquefaction Potential (Westminster 1996). Prior to construction of the Saigon Villas project, on the southeast portion of the project site, two geological studies that assessed the liquefaction hazards of the site; Geotechnical Investigation prepared by Lowney Associates, August 2003 (see Appendix B), and a Supplemental Geotechnical Investigation prepared by MGTL Inc., December 2004 (see Appendix C). The site is underlain by shallow groundwater; measured groundwater depths on the Saigon Villas site was between four and six feet below ground level. However, site investigations were conducted at the end of summer following a prolonged period of very little rainfall; therefore, groundwater depths of less than five feet are reasonable. There are sand layers (4 to 13 feet and 28 to 33 feet) that may liquefy during an earthquake over the life of the project. Liquefaction would cause up to 3.4 inches of settlement. Due to the relatively level nature of the subgrade this settlement is expected to produce a maximum of 1.7 inches of differential settlement.

Although the Specific Plan site is in a liquefaction zone, compliance with established regulations that are required for all projects in the City of Westminster would reduce liquefaction hazards. All future structures on the site are required to be constructed in accordance with the Uniform Building Code (with State of California modifications) and state seismic safety standards. Additionally, the City's general plan states that compliance with Public Safety Policies VA1-2, VA1-3, and VA1-4 would reduce potential significant impacts to less-than-significant levels. The compliance with general plan policies is therefore required for this project and they are included as part of the project (Westminster 1996).

General Plan Policies VA1-2 and VA1-3. During plan check, the applicant shall submit a geologic report to the City of Westminster Building Department to identify site conditions and potential seismic geologic hazards risk and recommend measures to reduce potential safety impacts. The project design and development shall incorporate all recommended measures outlined in the geologic report to ensure that safety is not compromised.

General Plan Policy VA1-4. All grading and construction plans shall clearly indicate required mitigation measures.

The geologic report submitted in support of the grading permit and building permit applications is required to include a liquefaction study and groundwater survey. The geologic report will be prepared by a California-registered geotechnical engineer and will provide criteria for design of foundations and underground walls and slabs, including waterproofing. The report will be prepared according to CDC's Guidelines for Analyzing and Mitigating Seismic Hazards in California and will include results from a detailed field investigation, a geotechnical field investigation, and geotechnical laboratory testing (CDC 1997b). The geologic report will also contain a groundwater survey of the entire site. The analysis will include information on any potential impact of groundwater on building and structural foundations and include proposed mitigation to avoid potential for groundwater intrusion within five feet of the bottom of the footings.

Based on the geologic report completed for Saigon Villas (Planning Area E of the Specific Plan), liquefaction hazards on the site have an acceptable factor of safety for liquefaction resistance through the implementation of methods to prevent structural damage from liquefaction (MGTL 2004). Methods used for Saigon Villas included one or more of the following:

- excavation and removal or recompaction of potentially liquefiable materials
- in-situ (i.e., in place) ground densification (e.g., compaction with vibratory probes, compaction grouting)
- other types of ground improvement (e.g., permeation grouting, deep drains, structural fills, dewatering)
- deep foundations (e.g., piles, piers)
- reinforced shallow foundations (e.g., grade beams, rigid raft foundations)
- design of structures to withstand predicted ground softening and vertical and lateral ground displacement

The project applicants will complete a liquefaction and groundwater study as part of the geologic report and implement required measures. Liquefaction hazards would be less than significant.

iv) Landslides?

No Impact. The proposed project site is not susceptible to landslides. The flat terrain of the project site would reduce any risks to people and structures resulting from landslides. No project-related landslide impacts would occur and no further analysis is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The proposed project would not create conditions that would result in substantial soil erosion. The project site is flat and currently developed with commercial and light industrial land uses. paved parking lots, and roads. Because of its lack of exposed soil and flat terrain, there is currently no soil erosion or loss of topsoil on the site. The buildout of the proposed project would not substantially increase the amount of exposed soil. Areas of public open space would be hardscaped and landscape pockets would be contained. Therefore, no soil erosion would occur during project operation.

Exposed onsite soils would, however, be particularly prone to soil erosion impacts during the construction phase of each future project, especially during heavy rains. Construction activities that could increase erosion potential would involve grading, excavation, and hauling materials on and off the site. Project applicants are required to comply with the City's erosion control plan policies, which specify best management practices (BMPs) for temporary erosion controls. The City's erosion control plan policies that relate to the project are shown below. Prior to obtaining a grading permit, the applicant is required to prepare and submit an erosion control plan to the City of Westminster Engineering Department to reduce erosion of on- and offsite soils. The erosion control plan will include, but not be limited to, the following measures.

- The contractor shall water the site at least twice daily to reduce potential wind erosion and fugitive dust impacts.
- The contractor shall be responsible for implementing wheel washing for the construction vehicles and equipment leaving the site to reduce deposition soil into the public right-of-way.
- During construction, the contractor shall implement street sweeping in the vicinity of the project at least once per week, or as deemed necessary by the City's Building and Engineering Departments.



• During construction, the contractor shall implement the BMPs, as identified in the erosion control plan and Storm Water Pollution Prevention Plan.

Project-related impacts to soil erosion and the loss of topsoil are less than significant and no additional analysis is required.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact. Construction and operation of the proposed project would not result in landslides, lateral spreading, subsidence, or collapse. The project site is atop Holocene and late Pleistocene alluvial fan deposits. Because the site and surrounding area are flat, risks to people and structures resulting from on- or offsite landslides would not occur. Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open area such as an open body of water, channel, or excavation area. Generally in soils, this movement is due to failure along a weak plane, and may often be associated with liquefaction. There are no creeks or open bodies of water on or near the site; therefore, the probability of lateral spreading occurring at the site during a seismic event is low (MGTL 2004).

Collapsible soils consist of loose, dry, low-density materials that collapse and compact under the addition of water or excessive loading. The proposed project site consists of artificial fill underlain by native soils of medium dense to dense silty to clean sands interbedded with fine grained moist to wet and stiff to hard silt and clay. The site is not characterized as having loose, dry, or low-density soils. The groundwater in the southeast portion of the Specific Plan site was found to be between four and six feet below ground surface. Collapsible soils were not identified as a risk for the site (Lowney Associates 2003).

Subsidence of the ground surface has been reported in the alluvial basins where significant amounts of groundwater, often in an overdraft condition, are withdrawn from the local aquifer (Lofgren 1971). This results in a significant lowering of the groundwater levels, potentially resulting in subsidence of the ground surface. The proposed project would not require a substantial amount of groundwater and would not result in ground surface subsidence.

The project site is in a liquefaction zone. There are sand layers (4 to 13 feet and 28 to 33 feet) that may liquefy during an earthquake over the life of the project. Liquefaction would cause up to 3.4 inches of settlement. Due to the relatively level nature of the subgrade this settlement is expected to produce a maximum of 1.7 inches of differential settlement. Shrinkage of fill material and native alluvial materials is expected to range from 5 to 15 percent (MGTL 2004).

Compliance with established regulations that are required for all projects in the City of Westminster would reduce unstable soil impacts to less than significant. All future structures on the site are required to be constructed in accordance with the Uniform Building Code (with State of California modifications) and state seismic safety standards. Additionally, the City's general plan states that compliance with Public Safety Policies VA1-2, VA1-3, and VA1-4 would reduce potential significant impacts to less-than-significant levels. Compliance with these general plan policies is therefore required for this project and they are included as part of the project (City of Westminster 1996). Project-related landslide, lateral spreading, subsidence, liquefaction, or collapsible soil impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansive soils swell when they become wet and shrink when they dry out, resulting in the potential for cracked building foundations and, in some cases, structural distress of the buildings themselves. Expansive soils are not suitable for building foundations as they tend to be compressible and do not provide adequate support. Approximately 25 per cent of Westminster is underlain by soils with expansive or noncohesive properties. These soils occur in the northwestern corner and southeastern portion of the city (City of Westminster 1996). Although exact composition of the onsite soils is unknown, the project site is located outside areas identified as having expansive soils. Based on the review of the onsite soil types and a review of the Soil Survey of Orange County, the site is not on expansive soil. Standard grading technologies and compliance with current grading requirements in accordance with the seismic requirements of the California Building Code (CBC), CCR Title 24, and Division of State Architect seismic safety requirements would reduce impacts from expansive soils to a less than significant level. Project-related expansive soil impacts are less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. Development of the proposed project would not require the installation of a septic tank or alternative wastewater disposal system. The project would use the local sewer system. Therefore, no impacts would result from septic tank or other onsite wastewater disposal systems and no further analysis is required.

4.7 GREENHOUSE GAS EMISSIONS

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact. The proposed project would generate greenhouse gas emissions (GHG) during construction activities and from stationary and mobile sources associated with operation of future land uses. The Moran Street Specific Plan would allow retail, office, residential, and hotel building space, potentially increasing greenhouse gas emissions generated from construction activities, project-related traffic, and area sources. Project-related GHG emissions will be evaluated in the EIR.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. The project would increase traffic and building densities on the site and may conflict with GHG plans, policies, or regulations. The EIR will evaluate the projects compliance with GHG plans, policies, or regulations, such as CARB's Scoping Plan.

4.8 HAZARDS AND HAZARDOUS MATERIALS

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less Than Significant Impact. The proposed project would not result in the routine transport, use, or disposal of hazardous materials. During construction, hazardous substances typically used in construction, including paints, solvents, and cleaners, would be transported and used onsite. Grading and construction activities would also require the transport, storage, handling, use, and disposal of hazardous materials such



as fuels and greases for the fueling and servicing of construction equipment. Although these types of materials are not acutely hazardous, they are classified as hazardous materials and may create the potential for accidental spills, which could affect workers and possibly future residents.

Hazardous materials handling on the project site over the long-term construction of the project may result in soil and groundwater contamination from accidental spills. Depending on the size of each future project on the Specific Plan site, implementation of a Storm Water Pollution Prevent Plan (SWPPP) and Monitoring Program would be required. The SWPPP is a state requirement under the National Pollution Discharge Elimination System (NPDES) permit for construction sites over one acre. The SWPPP identifies potential sources of pollution from the project that may affect the quality of stormwater discharge, and requires that BMPs be implemented to prevent contamination at the source. By implementing BMPs during construction activities, accidental spills of hazardous materials would be contained, and soil and groundwater contamination would be minimized or prevented. Under the NPDES permit, significant redevelopment projects are required to prepare and implement a project-specific water quality management plan (WQMP). Impacts from use of hazardous materials during construction activities would be less than significant.

The Specific Plan would be implemented over time as the market dictates; therefore, some existing uses such as automotive service facilities may remain onsite while other uses such as residential units are developed. During operation, existing uses would continue to transport, use, or dispose of hazardous materials such as cleaning solvents, waste oil, and sludge. Several regulations govern the transport, use, and disposal of hazardous materials in Orange County. Existing and future businesses on the site that handle hazardous materials are required to submit a Hazardous Materials Business Plan to the Orange County Environmental Health Division. Preparation and implementation of the Business Plan would minimize accidental release of hazardous materials into the environment. Hazardous materials handling impacts would be less than significant.

The storage, handling, and disposal of hazardous materials are regulated by the Environmental Protection Agency, Occupational Safety & Health Administration (OSHA), OCFA, and the Orange County Environmental Health Department. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would minimize the potential for safety impacts to occur and would ensure that all potentially hazardous materials are used and handled in an appropriate manner. Impacts related to the routine transport, use, or disposal of hazardous materials would be less than significant and no further analysis is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact. The project is not expected to result in upset or accidents involving the release of hazardous materials. Acutely hazardous materials, which are defined as having the potential to cause severe biological harm or death soon after a single exposure or dose, would not be used, stored, or disposed of on- or offsite. Existing and future land uses would not use acutely hazardous materials.

Oil and diesel. Most of the hazardous substance generators on site include auto repair/service/parts facilities that generate waste oil, mixed oil, separation sludge, solvent mixtures, and other organic solids. These substances are recycled offsite or disposed of properly. Additionally, the fire station has underground diesel storage tanks. No violations are listed for any onsite facilities. Prior to the urban development of Westminster, the majority of the City was used for agricultural purposes during a time of persistent pesticide usage; therefore, onsite soils may have residual pesticides.

Lead-Based Paint and Asbestos-Containing Materials. Structures on the site were built before 1978 and may contain lead-based paint (LBP) or asbestos-containing materials (ACMs). During removal of these buildings, LBP and ACMs may be released. Prior to demolition, buildings would be assessed for the presence LBP and ACM. Removal of ACMs would comply with state and federal regulations, including South Coast Air Quality Management District (SCAQMD) Rule 1403. Rule 1403 specifies work practice requirements to limit asbestos emissions from building demolition activities, including the removal and associated disturbance of ACM. The requirements for demolition activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and cleanup procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials.

Removal of lead paint, should it be found in buildings, would comply with OSHA Rule 29 CFR Part 1926. The OSHA rule establishes standards for occupational health and environmental controls for lead exposure. The standard also includes requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation and monitoring. Because 29 CFR Part 1926 is an existing federal law, compliance is mandatory. Furthermore, Title 17, CCR, Division 1, Chapter 8, identifies procedures for accreditation, certification, and work practices for lead-based paint and lead hazards. Section 36100 thereof specifically sets forth requirements for lead-based paint abatement in public and residential buildings.

Agricultural Use. The site may have been used for agricultural purposes during the time of persistent pesticide usage, and soil at the site may have residual pesticides. Soil sampling to assess if residual pesticides are present in the surface soil is an option. There are no county, state, or federal laws requiring sampling of a site to evaluate for residual pesticides; therefore, sampling and analysis for pesticides are recommended as an option and not a requirement. If testing is done, it should be conducted by a qualified environmental consultant and should identify if residual persistent organochlorine pesticides are in quantities above California Human Health Screening Levels established by CalEPA in January 2005.



Various federal and state regulations and programs regulate the use, storage, and transportation of hazardous materials. Several of the existing federal and state programs are summarized below.

Comprehensive Environmental Response, Compensation and Liability Act. The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) is a regulatory law developed to protect the water, air, and land resources from the risks created from past chemical disposal practices. This law is also referred to as the Superfund Act and regulates sites on the National Priority List (NPL), which are referred to as Superfund Sites.

Emergency Planning and Community Right-to-Know Act. The primary purpose of the federal Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 is to inform communities and citizens of chemical hazards in their areas. Sections 311 and 312 of the EPCRA require businesses to report to state and local agencies regarding the location and quantities of chemicals stored on-site. Under Section 3131 of EPCRA, manufacturers are required to report chemical releases for more than 600 designated substances. In addition to releases of chemicals, the facilities are also required to report off-site transfers of waste for treatment or disposal at separate facilities, pollution prevention measures, and activities related to chemical recycling. The EPA maintains the Toxic Release Inventory (TRI) database to document this information, which is reported annually by regulated facilities.

Resource Conservation and Recovery Act. The Resource Conservation and Recovery Act (RCRA) is the principal federal law that regulates generation, management, and transportation of waste materials. Hazardous waste management includes the treatment, storage, and disposal of hazardous waste.

Hazardous Materials Release Notification. Many state statutes require emergency notification of a hazardous chemical release. These statutes include:

- Health and Safety Codes §§ 25270.7, 25270.8, and 25507
- Vehicle Code § 23112.5
- Public Utilities Code § 7673, (PUC General Orders #22-B, 161)
- Government Code § 51018, 8670.25.5 (a)
- Water Codes §§1 3271, 13272
- California Labor Code § 6409.1 (b)10

Requirements for immediate notification of all significant spills or threatened releases cover owners, operators, persons in charge, and employers. Notification is required regarding significant releases from facilities, vehicles, vessels, pipelines, and railroads. In addition, all releases that result in injuries or worker being harmfully exposed must be immediately reported to Cal/OSHA (CA Labor Code § 6409.1 (b)).

Hazardous Materials Disclosure Programs. The Unified Program administered by the State of California consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for the environmental and emergency management programs, which include Hazardous Materials Release Response Plans and Inventories (Business Plans), the California Accidental Release Prevention (CalARP) Program, and the Underground Storage Tank Program. The Unified Program is implemented at the local government level by Certified Unified Program Agencies (CUPAs). The CUPA with responsibility for the City of Westminster is the County of Orange Environmental Health Department.

Hazardous Materials Business Plans. Both the federal government (Code of Federal Regulation) and the State of California (California Health and Safety Code) require all businesses that handle more than a specified amount of hazardous or extremely hazardous materials, termed a "reporting quantity," to submit a Hazardous Material Business Plan to its CUPA.

Business plans must include an inventory of the hazardous materials at the facility. Businesses are required to update their business plan at least once every three years and the chemical portion of their plan every year. Also, business plans are required to include emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous material. These plans need to identify the procedures for immediate notification of all appropriate agencies and personnel, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information for all company emergency coordinators of the business, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel.

California Accidental Release Prevention Program. The CalARP became effective on January 1, 1997, in response to Senate Bill 1889. The CalARP aims to be proactive and therefore requires businesses to prepare Risk Management Plans (RMP).

Leaking Underground Fuel Tanks. Leaking underground storage tanks (LUST) have been recognized since the early 1980s as the primary cause of groundwater contamination by gasoline compounds and solvents. In California, regulations aimed at protecting against UST leaks have been in place since 1983 (California Health and Safety Code), one year before the RCRA was amended to add Subtitle I, which required UST systems to be installed to prevent future leaks (Code of Federal Regulations). The State Water Resources Control Board (SWRCB) has been designated the lead regulatory agency in the development of UST regulations and policy.

Older tanks are typically single-walled steel tanks. Many of these have leaked as a result of corrosion and detached fittings. As a result, the State of California required the replacement of older tanks with new double-walled, fiberglass tanks with flexible connections and monitoring systems. UST owners were given 10 years to comply with the new requirements, and the deadline was December 22, 1998. However, many UST owners did not act by the deadline, so the state granted an extension for the Replacement of Underground Storage Tanks program to January 1, 2002. Tanks that have not been replaced are out of compliance with this requirement. The SWRCB, in cooperation with the Office of Emergency Services, maintains an inventory of leaking underground fuel tanks in a statewide database.

Superfund Amendments and Reauthorization Act. In 1986, Congress passed the Superfund Amendments and Reauthorization Act (SARA). Title 5 of this regulation requires that each community establish a Local Emergency Planning Committee (LEPC) that is responsible for developing a chemical emergency plan. The emergency plan is reviewed by the State Emergency Response Commission (SERC) and publicized throughout the community. The LEPC is required to review, test, and update the plan each year.

California Code of Regulations Title 22, Division 4.5. Title 22, Division 4.5 of the California Code of Regulations (CCR) sets forth the requirements with which hazardous-waste generators, transporters, and owners or operators of treatment, storage, or disposal facilities must comply. These regulations include the requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. In addition, the regulations identify standards applicable to transporters of hazardous waste. These regulations specify the requirements for transporting shipments of hazardous waste, including manifesting, vehicle registration, and emergency accidental discharges during transportation.

Clean Water Act. The proposed project is subject to federal permit requirements under the CWA. In 1972 the Federal Water Pollution Control Act (later referred to as the CWA) was amended to require that the discharge of pollutants to waters of the United States from any point source be effectively prohibited, unless the discharge is in compliance with a National Pollutant Discharge Elimination System permit. In 1987 the CWA was again amended to add Section 402(p), requiring that the EPA establish regulations for the permitting of stormwater discharges by municipal and industrial facilities and construction activities under the NPDES permit program.

The CWA authorizes the EPA to permit a state to serve as the NPDES permitting authority in lieu of the EPA. The State of California has in lieu authority for a NPDES program. The Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.) authorizes the SWRCB, through the California Regional Water Quality Control Board (RWQCB), to regulate and control the discharge of pollutants into waters of the State. The SWRCB entered into a memorandum of agreement with the EPA on September 22, 1989, to administer the NPDES program governing discharges to waters of the United States.

In addition, the CWA requires the states to adopt water quality standards for water bodies and have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality objectives necessary to support those uses. Water quality objectives can be numerical concentrations or levels of constituents, such as lead or suspended sediment, or narrative statements that represent the quality of water needed to support a particular use.

Orange County Fire Authority. The OCFA conducts Uniform Fire Code inspections and assists in reducing risks associated with the use of hazardous materials in the community. The OCFA also has a dedicated hazardous materials response team. The hazardous materials control and safety programs and available emergency response resources of the OCFA, along with OCFA periodic inspections to ensure regulatory compliance, reduce the potential risk associated with nearby commercial and industrial businesses.



With compliance with existing federal, state, and local requirements, impacts related accidental release of hazardous materials would be less than significant and no further analysis is required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. Murdy Elementary School is approximately a quarter-mile northeast of the site, at the corner of Bushard Street and Lexington Avenue. The operation of the proposed urban mix of land uses on the project site would not involve the handling or emission of hazardous or acutely hazardous materials. The proposed project would permit the development of residential, retail, and office land uses. These uses are not expected to use significant quantities of hazardous materials or generate hazardous emissions. Preparation and implementation of the Business Plan and compliance with SCAQMD Rule 212 would minimize accidental release of hazardous materials into the environment. Hazardous emission impacts would be less than significant and no further analysis is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant Impact. Existing uses of the proposed project site include some industrial businesses (automotive repair shops), and portions of the project site are zoned for commercial/industrial use. A search of available environmental records was conducted for the project area (EDR 2004.). The database search was conducted for areas within one mile of the project site. As part of the government records search, several databases were accessed, including Resource Conservation and Recovery Act (RCRIS); Facility Index Systems/Facility Identification Initiative Program Summary Report (FINDS); Hazardous Waste Information System (HAZNET); and Hazardous Substances Storage Container Database (UST HIST). These sources recognize locations that generally store, transfer, or use hazardous and potentially hazardous materials. The Environmental Data Resources report meets the government records search requirements of the American Society of Testing and Materials Standard Practice for Environmental Site Assessments. The review of governmental regulatory agency databases revealed 35 facilities on the site and within a 0.25-mile radius of the project site.

Table 3 lists the onsite locations of hazardous materials, the databases in which they are listed, and information regarding the substances or materials on those sites.

Table 3
Nearby Hazardous Substances or Materials

Name	Address	Listed	Violations/Information
	Auuress	Listeu	Generates unspecified solvent mixture.
PLT	15185 Moran Street	HAZNET	Recycled offsite. No violations listed.
Pacific Coast Painting	15181 Moran Street	RCRIC-SQG; FINDS	Small-quantity generator. No violations found.
Bolsa Auto Repair & Muffler	15175 Moran Street	HAZNET	Generates waste oil and mixed oil. Recycled offsite. No violations listed.
Weld Right	15201 Moran Street	RCRIC-SQG; FINDS	Small quantity generator. No violations found.
Jacobsons Mobile Auto Tune	15167 Moran Street	RCRIC-SQG; FINDS	Small quantity generator. No violations found.
Da Tai Auto Repair	15165 Moran Street	HAZNET	Generates aqueous solution 10% organic residues. Recycled offsite. No violations listed.
1X Westminster Industrial Venture	150205 Moran Street	HAZNET	Generates waste oil and mixed oil. Recycled offsite. No violations listed.
ABC Auto Repair	15159 Moran Street	HAZNET	Generates waste oil and mixed oil. Recycled offsite. No violations listed.
California Metal Systems Inc.	15131 Moran Street	HAZNET; UST	Generates waste oil/water, separation sludge, and mixed oil. Recycled offsite. No violations listed.
Cal Metal Systems, a Cal Corp.	15131 Moran Street	FINDS; EMI	No violations listed.
A&D Auto Body	15109 Moran Street	HAZNET; LOCAL	Generates solvent mixture waste and other organic solids. Recycled offsite. No violations listed.
Mueller Pipeliners Inc.	15082 Moran Street	HAZNET	Generates waste oil and mixed oil. Recycled off site. No violations listed.
Atlantic Auto Parts & Repair	15081 Moran Street	HAZNET	Generates solvent mixture waste and other organic solids. Recycled offsite. No violations listed.
Orange County Fire Station # 66	15061 Moran Street	UST; HIST UST; LUST Cortese; CA FID UST	Minor leaking from diesel underground storage tanks. No action required. Case closed.
N Q Design	15058 Moran Street	CLEANERS	No violations listed.
Alex Datsun SVC	15058 Moran Street	RCRIS-SQG; FINDS	Small-quantity generator. No violations found.
Allstar Manufacturing	15171 Weststate Street	RCRIS-SQG; FINDS; HAZNET	Small-quantity generator. No violations found.



The types of facilities listed are typically found in urban areas and are not considered a danger to the health of persons who would reside at the proposed project. Additionally, no businesses operating within 0.25 mile of the project site had a significant release or mishandling of any hazardous substances. Therefore, hazard impacts are considered less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The proposed project would not be within two miles of a public airport, nor would it be within a public airport land use plan. The nearest public use airport is Orange County/John Wayne Airport in Santa Ana, approximately 7.2 miles to the southeast. Since the project would not subject people living or working in

the project area to any hazards related to the use of the airport, no project-related airport safety hazard impacts would occur and no further analysis is required.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. Safety hazards related to private airstrips would not occur as result of the proposed project. The project site is approximately 1.75 miles east of a privately owned heliport at the intersection of Hoover Street and Bolsa Avenue (AirNav 2009). Due to the distance of the project site from the heliport and the flight patterns of helicopters during take-offs and landings, the people residing or working in the proposed project area would not be put at risk. No project-related private airstrip impacts would occur and no further analysis is required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed Specific Plan buildout would not interfere with emergency response or evacuation plans. The guidelines and standards of the specific plan would maintain street dimensions to allow for emergency vehicle access. Individual businesses would also maintain their own emergency evacuation plans, which would not be impacted by the proposed project. The City maintains an emergency operations plan, which outlines the City's planned response to emergency situations involving natural disasters, technological incidents, and nuclear defense operations (City of Westminster 1996). The plan identifies the emergency management organization as being responsible for emergency support and protection. OCFA provides emergency medical and fire protection support, and the Westminster Police Department is responsible for coordinating law enforcement and traffic control operations in emergency situations. The project would not affect the existing emergency service operations. Project-related emergency response and evacuation impacts would be less than significant and no further analysis is required.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. Wildland fires would not be a substantial risk at the proposed project site. The site is completely urbanized and is surrounded by urban commercial and residential uses. There are no wildland areas on or adjacent to the site. No project-related wildland fire impacts would occur and no further analysis is required.

4.9 HYDROLOGY AND WATER QUALITY

a) Violate any water quality standards or waste discharge requirements?

Less than Significant Impact. Long-term operational impacts on water quality are not anticipated because the project would not increase the amount of impervious surfaces or increase polluted runoff. The Specific Plan project may increase some short-term impacts from runoff of water and sediments during construction of the project.

During construction, sediment from erosion is the pollutant most frequently encountered. Additionally, a typical construction site uses many substances and materials, such as gasoline, oils, grease, solvents, and lubricants, along with concrete, trash, and sanitary wastes, that could be washed into storm drains during heavy rains. These substances and materials can be hazardous to aquatic life should they enter a waterway.

Potential Dewatering Activities. Impacts to surface water quality may occur during possible dewatering activities. Because the specific plan permits several types of parking structure, including subterranean, and a variety of land uses, future development that is constructed below grade may be subject to shallow groundwater levels and may be inundated by groundwater. Dewatering may be required to construct belowgrade structures to lower the water table at the site of the foundation to make construction possible. Any below-grade structures would be sealed to be impermeable to possible surrounding groundwater inundation.

As discussed in Section 5.5, *Geology and Soils*, prior to the issuance of grading permits, individual project applicants will submit a groundwater survey as part of the geologic report. Wastewater generated as a part of dewatering would be discharged to the sanitary sewer for treatment at a wastewater treatment plant, if possible. If dewatering discharge to surface waters is unavoidable, before issuance of a grading permit and any dewatering activities, project applicants are required to comply with several water quality regulations to ensure discharges do not significantly degrade surface water quality. Water would be tested for required constituants (chemicals), and if water exceeds established limits then pretreatment may be required prior to discharge.

The proposed project would be required to comply with NPDES Permits Program and City of Westminster requirements for stormwater discharge during construction and operations. Under the County of Orange NPDES permit issued by the RWQCB, Santa Ana Region (SARWQCB), for stormwater discharges from municipal separate storm sewer systems (MS4), the City of Westminster is required to ensure that discharges from its municipal storm drain systems do not cause or contribute to exceedances of receiving water quality standards (designated beneficial uses and water quality objectives) for surface waters or groundwater.

A Water Quality Management Plan (WQMP) must be prepared for any project that involves "significant redevelopment" (Orange County Public Works 2009). Significant redevelopment is defined as projects that include the addition or replacement of 5,000 square feet or more of impervious surface on a developed site. Because the site is almost entirely impervious surfaces, the proposed project is expected to replace more than 5,000 square feet of impervious surfaces on the site. The WQMP will identify a program for the implementation of specific structural and nonstructural BMPs to address water quality issues so that predictable runoff is controlled. The WQMP will identify the location and type of structural BMPs that "infiltrate, filter, or treat" either the volume or flow rate of stormwater runoff. In compliance with WQMP requirements, future applicants would submit final detailed project designs to the City Engineer for approval.

Also, implementation of the proposed project would require coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ) (SARWQCB 2009). As part of coverage under the Construction General Permit, a SWPPP must be developed to control construction-related runoff. In compliance with SWPPP requirements, future applicants would prepare a SWPPP and provide proof that a Notice of Intent (NOI) to file a NPDES permit was filed with the SARWQCB. Project-related water quality impacts would be less than significant and no further analysis is required.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. The project would not substantially deplete groundwater supplies. The proposed project would not reduce the amount of onsite pervious surface and it would not substantially



increase the use of local groundwater. The project site is currently developed with buildings, parking lots, and roadways. There are a few areas of landscaping adjacent to buildings or in parking lots, but they are not large enough to provide groundwater recharge.

The project-related demand for groundwater would not be increased by an amount that would lower local groundwater levels. The proposed project would require approximately 76,633 additional gallons of water per day (82.5 acre-feet per year) over existing uses. Approximately 70 percent of the City's water supply comes from the groundwater (Orange County Groundwater Basin) supplied by the Orange County Water District (OCWD) and 30 percent from Metropolitan Water District of Southern California (MWD) sources. The groundwater basin is recharged by the Orange County Sanitation District from over two dozen separate facilities, covering over 1,000 acres (OCWD 2008a).

Groundwater used in Westminster is not pumped directly from the groundwater basin below the project site. Implementation of the project would not create a substantial demand on groundwater sources and would not significantly change the amount of groundwater available and pumped from local wells. The project does not involve the direct withdrawal of groundwater for municipal use and would not substantially interfere with recharge capabilities. Impacts to groundwater wells would be less than significant.

Because future buildings may be below grade and subject to shallow groundwater levels, during construction, an unknown amount of dewatering may be required to set the footings, foundation, and walls. Additionally, a small amount of ongoing dewatering may be required to address possible leakage and minor surface water inundation during operation. Dewatering would not deplete overall groundwater supplies because groundwater used in Westminster is not pumped directly from the groundwater basin below the project site.

Additionally, the possible intrusion of future buildings into the groundwater level would not obstruct or restrict the water flow. The size of any future building compared to the large size of the groundwater layer is considered negligible. Impacts to groundwater level, flow, and recharge are therefore considered to be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.

Less Than Significant Impact. The project would not alter the existing drainage pattern of the site or cause substantial erosion or siltation. The project site is currently developed with buildings, parking lots, and roadways. There are no areas of open space and all drainage is directed to the City's stormwater system. Construction activities could increase erosion potential during the grading, excavation, and hauling of materials on and off the site. This would result in onsite soils being prone to soil erosion impacts, especially during heavy rains. The project is required to comply with the conditions of the BMPs. The future applicants are required to submit a WQMP and an Erosion Control Plan identifying all appropriate routine and minimum structural and nonstructural BMPs as part of the SWPPP. Project-related drainage (erosion or siltation) impacts would be less than significant and no further analysis is required.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact. The project would generate approximately the same amount of stormwater flowing off the site during wet weather conditions as the site does currently; therefore, existing drainage

facilities are expected to have adequate capacity to accommodate stormwater flows from the site development without contributing to flooding. The project site is currently developed with buildings, parking lots, driveways, roads, and other impervious surfaces. There are no areas of open space and all drainage is directed to the City's stormwater system. The existing storm drain system currently directs stormwater flows to the East Garden Grove Wintersburg Channel. The proposed project would not alter any streams or rivers, or substantially increase the rate or amount of surface runoff. Flooding impacts would be less than significant and no further analysis is required.

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact. The majority of the project site is currently covered with impervious surfaces, including buildings, parking lots, roadways, and walkways. All stormwater runoff from the project site flows across paved surfaces to the catch basins at the south end of the site. The existing onsite storm drain system consists of two catch basins at the intersections of Moran Street and Bishop Place, and the Asian Garden Mall exit and Bishop Place. Stormwater that flows into these two catch basins drains to storm drains that run south to the East Garden Grove Wintersburg Channel, which drains southwest to the Ocean View Channel, then drains west to the Pacific Ocean. The Saigon Villas, on the southeast corner of the project site, drains separately to the East Garden Grove Wintersburg Channel.

Long-term operational impacts on stormdrains are not anticipated because the project would not increase the amount of impervious surfaces on the site, and therefore would not increase the amount of stormwater runoff from the site. Existing stormdrains are adequately sized to convey stormwater from the site and surrounding community, therefore stormdrains are anticipated to be appropriately sized for future project buildout. Improvements may be needed to upgrade the existing storm drain system; however the system does not require new facilities or expansion of existing facilities to convey project-related future flows. No significant environmental effects would occur from construction of new or expanded storm drain facilities.



The proposed Specific Plan project would not contribute substantial additional sources of polluted runoff to the storm drain system. Over time as each component of the Specific plan is developed new water quality features would be constructed to ensure project applicants are required to comply with several water quality regulations to ensure discharges do not significantly degrade surface and groundwater quality. Compared to existing conditions, compliance with these regulations would improve water quality.

f) Otherwise substantially degrade water quality?

No Impact. Water quality would not otherwise be degraded as a result of the proposed project. No additional project-related impacts to water quality would occur and no further analysis is required.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The project site is not in a 100-year flood hazard zone (FEMA 2009). The project site is located in Flood Zone X, which is outside a 100-year flood hazard area. There would be no structures placed in a 100-year floodplain and no project-related impacts regarding the placement of housing in 100-year floodplains would occur. No additional analysis is necessary.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. The project would not expose people to significant flooding hazards. Westminster is located within the alluvial plains of the San Gabriel and Santa Ana Rivers, which are both outside City limits. The project site is located in Flood Zone X, which means it is outside a 100-year flood hazard area zone (FEMA 2009). There would be no structures placed in a 100-year floodplain; therefore, no impacts would occur and no additional analysis is required.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less than Significant Impact. The proposed project would not create hazardous conditions related to flooding, including flooding as a result of the failure of a levee or a dam. There are no large bodies of water in the vicinity of the project site, including dams or levees (Google Earth 2009; DWR 2010). Westminster is located entirely within the dam inundation zone of Prado Dam, approximately 20 miles northeast. Prado Dam is a flood control and water conservation project constructed and operated by the US Army Corps of Engineers, Los Angeles District. The entire city is within the 500-year flood zone; however, floods depths would be less than one foot in the event of dam failure (City of Westminster 1996). The Los Angeles District has begun construction to increase the capacity of the reservoir behind Prado Dam. The modifications to the dam are currently taking place and include three phases:

- raising the height of the dam 30 feet, building a new intake tower, and constructing improvements to the dam's outlet works;
- constructing dikes in the basin to protect property;
- raising the height of the adjacent spillway 20 feet. (USACE 2005)

In the event of a dam failure, based on the distance to Prado Dam, the projected depth of potential floodwaters (less than one foot), and the emergency warnings that would be issued in the event of dam failure, the project would not expose people or structures to a significant risk of a 500-year flood event.

i) Inundation by seiche, tsunami, or mudflow?

No Impact. A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam or other artificial body of water. Thirteen dams in the greater Los Angeles area moved or cracked during the 1994 Northridge earthquake. However, none were severely damaged. This low damage level was due in part to completion of the retrofitting of dams and reservoirs pursuant to the 1972 State Dam Safety Act. There are no reservoirs, dams, or other bodies of water near the project site that would cause damage by a seiche. (Google Earth 2009; DWR 2010). Project-related seiche impacts would not occur and no further analysis is required.

Tsunamis are large oceanic waves caused by offshore earthquake events. Coastline communities are impacted by tsunamis when these waves are large enough to destroy buildings and structures. The project site is approximately 5.5 miles from the ocean and 42 to 53 feet above sea level (Lowney Associates 2003). The University of Southern California, the California Emergency Management Agency, and the California Geological Survey have mapped the tsunami inundation areas of Southern California. The proposed project

site is not within a tsunami inundation area (CDC 2009a). Additionally, there are no upgrade reservoirs or bodies of water. No project-related tsunami impacts would occur and no further analysis is required.

Because of the flat topography of the project site, there is little potential for mudflows. Both the project site and the surrounding areas have flat terrain and mudflows would not occur. Project-related mudflow impacts would not occur and no further analysis is required.

4.10 LAND USE AND PLANNING

a) Physically divide an established community?

No Impact. The project would not physically divide an established community. The proposed specific plan would allow for the development of retail, office, residential, and hotel land uses on the project site. These land uses would be consistent with the existing onsite and surrounding land uses. The phasing out of existing industrial land uses would improve the compatibility between land uses onsite and with adjacent land uses. As a result, no project-related impacts to established communities would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The proposed Moran Street Specific Plan would require revisions to the City of Westminster General Plan and zoning ordinance. The approval of the proposed Moran Street Specific Plan would change existing general plan land use designations (General Commercial and PD District) to PD and would rezone the site from C-M Commercial/Industrial, M-1 Light Industrial, C-2 General Business, and R-5 Residential to Specific Plan. In order for the proposed specific plan to be carried out, the PD District overlay would require revisions to reflect new acreages, vehicle trips, and permitted land uses. The proposed Specific Plan would also eliminate the Parking Overlay since exclusive parking uses are no longer needed. Revisions to the general plan and zoning code would be completed as part of the proposed project. Project-related impacts to land use plans, policies, or other regulations of a jurisdictional agency would be less than significant and no further analysis is required.



No Impact. The proposed project site is completely developed and does not provide natural habitat for biological resources. There are no habitat conservation plans (HCP) or natural community conservation plans (NCCP) on or near the project site (FWS 2010). Development of the proposed project would not interfere with any HCPs or NCCPs, no project-related impacts would occur, and no additional analysis is required.

4.11 MINERAL RESOURCES

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. The proposed project site is not used for mineral mining and it would not result in a loss of a valuable mineral resource for the region or state. The site is entirely urbanized and does not contain any known mineral resources. The County of Orange General Plan identifies three areas with mineral resource availability; none of these areas is on or near the project site (County of Orange 2005a). No project-related mineral resource availability impacts would occur and no further analysis is required.



b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The proposed project would not result in a loss of a locally valuable mineral resource. The site is developed with retail, restaurant, and automotive repair uses, which would preclude the mining of mineral resources. Previous environmental analysis for the Saigon Villas identified the project area as being in the MRZ-3 mineral resource zone, which includes areas containing mineral deposits of unknown significance (Jones & Stokes 2004). The existing and proposed development would preclude the site from being used for mineral resource extraction. No project-related impacts to locally important mineral resources would occur and no further analysis is required.

4.12 NOISE

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Impact. The proposed project could expose persons to noise levels in excess of standards established by the City of Westminster. Residential uses are considered sensitive receptors. The project site has residential uses to the east and south. These uses, along with on-site residential uses (Saigon Villas), would potentially be exposed to construction and operational noise (project-generated traffic) in excess of city standards.

A detailed noise study will be conducted to identify impacts associated with exposure of persons to or generation of noise levels in excess of established standards, and impacts will be analyzed in the EIR. Specifically, the noise study will evaluate construction (short-term) and operational (long term) noise impacts associated with the proposed project.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Potentially Significant Impact. In general, industrial projects, trains, or heavy trucks and buses can generate levels of groundborne vibration that are perceptible at vibration-sensitive land uses. The proposed project would result in the construction and operation of retail, commercial, office, and residential land uses. Therefore, operation of the Moran Street Specific Plan project would not generate substantial levels of vibration. However, construction activities can generate varying degrees of groundborne vibration, depending on the construction procedures and the equipment used. Construction equipment can generate vibration from vehicle travel as well as grading, pile driving, and other building construction activities. Ground-borne vibration can reach the levels that can damage very old or unstable buildings; however onsite buildings and anticipated construction activities are not anticipated to generate high intensity vibration. Construction activities have the potential to be perceptible at buildings close to the construction site. A detailed noise study will be conducted to identify impacts associated with exposure of persons to or generation of vibration and groundborne noise levels in excess of established standards, and impacts will be analyzed in the EIR.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. The proposed project could potentially result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Operation-related noise may lead to a permanent increase in ambient noise levels from mobile noise (increased traffic)

and stationary noise (higher density mix of land uses). Potential permanent increase in ambient noise will be further evaluated in the EIR.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. The project may generate a temporary or periodic increase in ambient noise levels. Short-term noise is associated with excavation, grading, and construction of buildings. Construction-related noise could potentially impact existing residences in the vicinity of the project site. The potential for construction activities to generate substantial noise levels at on- and offsite noise-sensitive receptors will be further evaluated in the EIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed project site is not within two miles of an airport runway or potential runway. The nearest public use airport is Orange County/John Wayne Airport in Santa Ana, approximately 7.2 miles to the southeast. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels and no further analysis is required.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. There are no private airstrips within two miles of the project site. Implementation of the proposed project would not expose people residing or working in the project area to excessive noise levels due to the operations of a private airstrip. No airstrip noise impacts would occur and no further analysis is required.

4.13 POPULATION AND HOUSING

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. The proposed project would not directly or indirectly induce substantial population growth. The proposed project would allow for an increase in retail, office, and hotel space on the project site. Given the importance of this area for the City and the Vietnamese community, and that the proposed Specific Plan development concept would enhance and expand this areas as a focal point of social activity, personal services, and commerce locally, regionally, and nationally, it is not unlikely that this project would result in more people moving to the City.

Additionally, the Moran Street Specific Plan would permit approximately 215 dwelling units with an estimated population of 741, based on Westminster's average household size of 3.4 persons per household (DOF 2009). This number represents a 0.8 percent increase to Westminster's current population of 93,284.

However, the above represents one scenario in terms of population growth. If market conditions dictate a different development concept, the City could permit additional residential units on the site. An increase to twice the residential units (430) would increase population by 1,482, which represents only a 1.6 percent increase in population growth.



The City of Westminster General Plan anticipates a buildout of 29,139 total dwelling units (City of Westminster 1996). Currently, there are approximately 27,444 dwelling units in the City (DOF 2009). The addition of 215 dwelling units would be within the City's parameters for future buildout. The proposed project does not require the extension of roads or other public infrastructure and would not indirectly provide an avenue for population growth. Project-related population growth impacts would be less than significant and no further analysis is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. Existing housing would not be displaced as a result of the proposed project. The only housing units on the project site are the recently completed Saigon Villas on the southeastern corner of the site. These units would remain as part of the proposed project. No project-related impacts to existing housing would occur and no further analysis is required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. Existing populations would not be displaced as a result of the proposed project. The existing Specific Plan site currently consists of commercial-retail and automotive service uses. The only housing units on the project site are the recently completed Saigon Villas on the southeastern corner of the site. These units would remain as part of the proposed project. No residential buildings are located on the development site. No project-related impacts to existing population would occur and no further analysis is required.

4.14 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?

Less than Significant Impact. The proposed project may increase the need for additional fire services. The OCFA provides fire and emergency services to the City of Westminster. OCFA operates Station 66 on the project site (15601 Moran Street). The next closest station (Station 25) is approximately one mile east of the project site at 8171 Bolsa Avenue in Midway City (OCFA 2010).

The proposed project site is currently developed with commercial retail and industrial land uses. Pursuant to the Specific Plan, the project site would be converted over time from retail, restaurant, and automotive service to a pedestrian-oriented mixed-use district with retail, restaurant, entertainment, hotel, office, and residential. The increased density and mix of land uses are anticipated to increase the demand on fire service personnel and equipment. As part of the Specific Plan building placement, sidewalks, and pavement markings would reduce conflicts with pedestrian and vehicle traffic. The site plans must also go through a consistency review by the OCFA. However, the proximity of the existing station from a public interface and emergency response standpoint for an area of increasingly high density and use couldn't be better (Elmer 2010).

The OCFA does not anticipate that the project would have a substantial adverse impact on fire protection. Project development is not expected to create a need for new or expanded fire station facilities. Impacts on fire protection would be less than significant and no further analysis is required.

b) Police protection?

Less Than Significant Impact. The proposed project would increase demand on police services. Police protection services are provided by the Westminster Police Department (WPD). The Westminster Police Department headquarters is located at the Westminster Civic Center, 8200 Westminster Avenue. The nearest substation to the project site is at 15492 Magnolia Avenue. The WPD's staff includes 96 sworn officers; response time to emergency service calls is generally two to five minutes (Panella 2010).

The proposed project site is currently developed with retail and industrial land uses. Pursuant to the Specific Plan, the project site would be converted over time from retail, restaurant, and automotive service to a pedestrian-oriented mixed-use district with retail, restaurant, entertainment, hotel, office, and residential. The increased density and mix of land uses are anticipated to increase the demand on police service. However, the WPD does not anticipate that the project would have a substantial adverse impact on police protection. Project development is not expected to create a need for new or expanded police facilities (Panella 2010). Impacts on police protection would be less than significant and no further analysis is required.

c) Schools?

Less than Significant Impact. The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities. The Specific Plan area is served by the Garden Grove Unified School District (GGUSD). The GGUSD encompasses 28 square miles of territory, serving most of Garden Grove and portions of six surrounding cities - Anaheim, Cypress, Fountain Valley, Santa Ana, Stanton, and Westminster (GGUSD 2010). GGUSD has 67 education facilities, including 46 elementary schools, 10 middle schools, 7 high schools, 2 special education centers, and 2 continuation schools. For the 2008–09 academic year, total enrollment was 48,574 students.



The proposed project would be within the attendance boundaries for Carrillo Elementary School, McGarvin Intermediate School, and La Quinta High School, and students living on the project site would go to one of these three schools (McCann 2010). Table 4 shows the recent and current enrollment numbers for these three schools.

Table 4 Student Enrollment					
Carrillo Elementary School	724	709	671	665	
McGavin Intermediate School	692	725	748	766	
La Quinta High School	1,788	1,874	1,956	2,071	
Source: McCann 2010; Education Data Partnership 2010.					

Although there has been some decline in elementary student population, all three schools are experiencing overcapacity conditions, as shown in Table 5.

Table 5 Existing Student Capacity			
Capacity	Overcapacity*		
350	90.0%		
432	77.3%		
1,701	21.6%		
	Existing Student Capacity Capacity 350 432		

As shown in Table 6, the proposed project could generate between 183 and 385 students. Since the schools are already experiencing overcrowded conditions, Carrillo Elementary School, McGarvin Intermediate School, and La Quinta High School would all continue to be overcrowded with the addition of the project-generated student population.

Table 6						
Project-Related Student Generation						
	Generation Rate	s (students/unit)¹	Student F	Population ²		
	Single-Unit		Single-Unit			
	Attached	Multifamily	Attached	Multifamily		
Elementary School (K–6)	0.982	0.463	211	100		
Middle School (7–8)	0.29	0.128	62	28		
High School (9–12)	0.52	0.258	112	55		
Student Total			385	183		

Source: McCann 2010

Votes:

Overcapacity conditions are accommodated through the use of portable classrooms. The school district has plans to expand existing facilities but it does not have plans for constructing any new schools.

¹ The proposed project would include either multifamily (apartment) or single-unit attached (condo) or a combination of both.

² Project-related student generation is rounded to the nearest whole number.

The need for additional school services is addressed by compliance with school impact assessment fees per SB 50. Payment of fees is considered full mitigation per California Government Code Section 65995(h) which states:

The payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities.

Senate Bill 50 (SB 50) establishes a per-pupil funding formula for new school construction, requires local districts to match state funds for new construction, allows school districts to establish reimbursement agreements with developers to cover their fees, and authorizes an Affordable Housing Assistance Program. The school district collects Level I developer fees to support the expansion and improvement school facilities. As part of the current Level I fees, new commercial development pays \$0.47 per square foot, and new residential development pays \$2.97 per square foot (McCann 2010).

These fees are collected by school districts at the time of issuance of building permits. The proposed project would be required to pay school impact fees under SB 50. Payment of these fees would offset impacts from increased demand for school facilities/services by providing an adequate financial base to construct and equip new and expanded schools. Impacts related to school services would be less than significant and no additional analysis is required.

d) Parks?

Less Than Significant Impact. The proposed project would not create a substantial demand for additional parks. The City of Westminster maintains a total of 81.45 acres of parkland in 25 parks, including the civic center. New residents would be served by 10 parks within the vicinity. Parks within one mile of the project site include: Westminster Park, Roger Stanton Park, Park West Park, Palos Verdes Park, Honeysuckle Park, Clover Dale Park, Elden F. Gilespie Park, Bowling Green Park, New Castle Park, and Coronet Park. Additionally, Mile Square Regional Park, which includes picnicking areas, paved walks, and three golf courses, is located approximately 1.5 miles southwest of the project. The Fountain Valley Recreation and Cultural Center also provides park space for the local population.

In accordance with the Quimby Act (California Government Code Section 66477) and City regulations (Westminster Municipal Code Title 16, Chapter 16.12), new residential housing projects in the City of Westminster must either dedicate a portion of the project as parkland or recreational facilities, pay in-lieu park fees, or a provide a combination of both.³ Additionally, the City adopted an ordinance reducing park inlieu fee requirements for senior housing by reducing the persons per household ratio for seniors, resulting in a30 percent decrease in park fees for senior projects.



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³ City park fees apply solely to subdivided projects (for-sale units only). The number of for-sale units in the development is multiplied by the State Department of Finance persons per household for the City to find the total population of the project. The total population is then multiplied by 108.9 square feet of parkland per person to determine the total land area required for park dedication. The total land area is then multiplied by the land cost (based upon a land appraisal of the site) to determine the gross in-lieu park fee. Forty percent of a project's gross in-lieu park fee requirement can be credited toward the total land area required for dedication (Westminster 2008).

The Specific Plan would allow development of new residential units; therefore, future development in the Specific Plan area is required to comply with these regulations. The Specific Plan would allow up to 215 residential units; however, market conditions will determine if the units are for sale or for rent. If these residential units are for-sale units such as condominiums, the developers would be required to dedicate a portion of the project as parkland or recreational facilities, pay in-lieu park fees, or a provide a combination of both, equal to approximately 15 acres of land. The proposed project would comply with Quimby Act and City regulations. Project-related park impacts would be less than significant and no further analysis is required.

e) Other public facilities?

Less Than Significant Impact. The proposed project would not create a need for new or physically altered library facilities. The City of Westminster is served by the Orange County Public Library (OCPL), which has 33 branches throughout Orange County. The closest library branch to the project site is the 18,000-square-foot Westminster Branch at 8180 13th Street (one mile northwest). The OCPL provides reading, audio, and visual resources for Orange County residents. The library system also participates in an interlibrary loan service program with other library systems in Southern California (County of Orange 2010). The OCPL follows the standard of five people for each square foot of library space to determine the need for new library space. The population in Westminster at the 2000 census was 88,207, requiring about 17,641 square feet of library space. The proposed project would allow for the development of housing in accordance with the proposed Specific Plan, increasing the local population and potentially surpassing the standard used by the OCPL system. Developer impact fees would be collected to offset the impacts to the library. Project-related impacts to libraries would be less than significant and no further analysis is required.

4.15 RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

Less Than Significant Impact. The proposed project would not cause physical deterioration of parks or recreational facilities. Overuse and deterioration of parks and recreational facilities occur when they have to support a population greater than their capacity. The increase in the use of recreational facilities is generally a result of significant population growth in an area. The project has the potential of increasing the City population by approximately 741 people. This would not result in a demand for new parks or cause substantial physical deterioration of existing parks. Additionally, no existing parks would be impacted by the project construction. Project-related recreational facility impacts would be less than significant and no further analysis is required.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less Than Significant Impact. Local recreational facilities or parks would not need to be expanded. Since the proposed project would not substantially increase the local population, it would not cause a need to expand recreational facilities or parks. Project-related recreational facility construction impacts would be less than significant and no additional analysis is required.

4.16 TRANSPORTATION/TRAFFIC

a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Potentially Significant Impact. The proposed project may conflict with local plans and policies that measure the effectiveness of the circulation system, including policies of the Westminster General Plan and the county congestion management plan (CMP) that contain standards for levels of service on area streets, intersections, highways, and freeways; alternative transportation; and pedestrian transportation. The proposed project would increase the amount of building square footage allowed onsite. The increase in building space may result in an increase in traffic, which could cause potential conflicts with local plans and policies. Additional analysis will be included in the EIR.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Potentially Significant Impact. The proposed project may cause an increase in traffic volume that would exceed the Orange County CMP standards for levels of service for intersections and mainlines. The proposed project would allow for an increase in onsite retail, office, hotel, and residential land uses that would cause a potential increase in traffic. Project-related impacts to the CMP would be potentially significant and additional analysis will be included in the EIR.



c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. Air traffic patterns would not be altered as part of the proposed project. The proposed project would allow for the development of retail, office, residential, and hotel land uses within the project area. No elements of the proposed project would involve or change existing air traffic patterns. No impacts would occur and no further analysis is required.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The existing layout of roadways would not be altered as part of the proposed project. Modifications would be made to the site circulation and parking lots, but driveways, intersections, and walkways would be designed to minimize hazards. All onsite and offsite land uses would be similar and no incompatible equipment would be used as a result of the implementation of the proposed project. No impacts would occur and no further analysis is required.

e) Result in inadequate emergency access?

No Impact. The design of the existing site would not be altered in a way that would prevent adequate emergency access. The overall layout of roadways would not change as part of the proposed project. Any modifications to circulation patterns and intersections would maintain adequate site access. The site plans must also go through a consistency review by the OCFA. No impacts to emergency access would occur and no further analysis is required.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The proposed project would not conflict with existing alternative transportation policies or programs. As part of the proposed project, the existing project site would be redesigned. Improvements would be made to existing onsite roadways, but no changes would be made to any alternative transportation routes. The Orange County Transit Authority (OCTA) runs a bus route along Bolsa Avenue, along the north boundary of the project site (OCTA Route 64). The changes to the site in accordance with the proposed project would not affect the bus route. Additionally, the site design would encourage the use of bicycles as alternative modes of transportation by encouraging businesses to supply bike racks on the project site. This would support local and regional alternative transportation policies and no impacts would occur. No further analysis is required.

4.17 UTILITIES AND SERVICE SYSTEMS

a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?

Less than Significant Impact. Due to potentially shallow groundwater depths under the Specific Plan site, groundwater may be encountered during construction activities, and may require dewatering. Additionally, stormwater that flows off the site during construction and operation of the project may contain pollutants.

Project applicants are required to comply with several water quality regulations to ensure discharges do not significantly degrade surface and groundwater quality. The proposed project would be required to comply with NPDES Permits Program and City of Westminster requirements for stormwater discharge during construction and operation. Under the County of Orange NPDES permit issued by the SARWQCB for stormwater discharges from municipal separate storm sewer systems (MS4), the City of Westminster is required to ensure that discharges from its municipal storm drain systems do not cause or contribute to exceedances of receiving water quality standards (designated beneficial uses and water quality objectives) for surface waters or groundwater.

A Water Quality Management Plan (WQMP) must be prepared. The WQMP will identify a program for the implementation of specific structural and nonstructural BMPs to address water quality issues so that predictable runoff is controlled. In compliance with WQMP requirements, future applicants would submit final detailed project designs to the City Engineer for approval.

Also, implementation of the proposed project would require coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ) (SARWQCB 2009). As part of coverage under the Construction General Permit, a SWPPP must be developed to control construction-related runoff. In compliance with SWPPP requirements, future applicants would prepare a SWPPP and provide proof that a Notice of Intent (NOI) to file a NPDES permit was filed with the SARWQCB. Project-related water quality impacts would be less than significant and no further analysis is required.

b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact.

Existing Water Supply and Distribution System

The City of Westminster Water Division provides water service to the City. In 2006 roughly 4.2 billion gallons of water were used in the City (or 12 million gallons per day [mgd]) (Filippelli 2008). The City obtains water from two sources: groundwater and imported water. There are 11 City-operated groundwater wells that tap the Orange County Main Groundwater Basin underlying the City. Also, water is imported from northern California and the Colorado River by the Municipal Water District of Orange County (MWDOC) via the Metropolitan Water District of Southern California (MWD). Groundwater comes from a natural underground aquifer that is replenished with water from the Santa Ana River, local rainfall and imported water. The ground water basin is 350 square miles and lies beneath north and central Orange County from Irvine to the Los Angeles border and from Yorba Linda to the Pacific Ocean. Groundwater comprises approximately 70 percent of the City's water supply.

Existing Water Treatment

Groundwater is chlorinated at the wellhead, and imported water is treated at the MWD's Robert Diemer Treatment Plant in Yorba Linda, which has a capacity of 400 million gallons per day.

Project Water Demands

The estimated net change in water demand that would result from development of proposed project is shown below in Table 7. The proposed project would generate a greater demand for water than the existing land uses on the site.



Table 7
Water Demand and Wastewater Generation

			Demand per day)	Wastewater (gallons	
Land Use	Units/SF	Per Unit Total		Per Unit⁴	Total
Existing Uses ¹					
Retail	205,680 SF	0.220 ²	45,249.6	0.154	31,674.7
Light Industrial	93,050 SF	0.060 ²	5,583.0	0.042	3,908.1
Residential	144 units	200	28,800.0	140	20,160.0
Total	-	-	79,633.6	-	55,742.8
Proposed Uses					
Retail	275,280 SF	0.220 ²	60,561.6	0.154	42,393.1
Office	38,400 SF	0.060^{2}	2,304.0	0.042	1,612.8
Hotel	120 rooms	180³	21,600.0	84	10,080.0
Residential	359 units	200 ²	71,800.0	150.5	54,029.5
Total	-	-	156,266.6	-	108,115.4
Net Change	-	-	76,633	-	52,372.6

Notes: SF= Square Feet

As shown above in Table 7, the proposed Specific Plan is forecast to increase water demand onsite by a net of approximately 76,633 gallons per day (or approximately 26.8 million gallons annually). This increase is approximately 0.6 percent more than the current annual water demand in the City and is not considered a significant increase. There is sufficient water supply and water treatment capacity in the region to service the proposed project (Miller 2010). The proposed project would not require new or expanded water supplies or water treatment facilities; therefore, impacts would be less than significant and no further analysis is required.

Wastewater Collection and Treatment System

Wastewater from the project site currently flows into the Midway City Sanitary District (MCSD) 15-inch sewer main on Bishop Place, then into the Bolsa Trunk (24-inch trunk sewer), then into the Magnolia Trunk (48-inch trunk sewer), and ultimately flows to Orange County Sanitation District (OCSD) Reclamation Plant No. 1.

The OCSD operates two wastewater reclamation plants that serve the project area. Plant No. 1 provides advanced primary and secondary treatment, has a maximum capacity of 204 mgd, and treats an average of 86 mgd. Roughly 66 mgd of effluent from Plant No. 1 are sent to the OCWD for further treatment in the groundwater replenishment system (GWRS) facility in Fountain Valley, which has a capacity of 70 mgd. GWRS-treated water is used for injection into the Main Orange County Groundwater Basin to control saltwater intrusion, or for recharging the Basin via percolation basins (OCWD 2008b). An additional 3.3 mgd of effluent from Plant No. 1 are sent to the OCWD for tertiary treatment in a separate facility; this water is then delivered to customers for irrigation use. The balance of effluent from Plant No. 1, roughly 16.7 mgd, is sent to Reclamation Plant No. 2 in the City of Huntington Beach, approximately 12.7 miles southwest of the project site, and is subsequently discharged through the ocean outfall system. Plant No. 2, which receives wastewater from several major sewers in addition to Plant No. 1, has an average treatment flow rate of 124 mgd and a maximum treatment capacity of 168 mgd (McNelly 2010). The treated wastewater is released into

¹ Existing land uses are based on existing zoning; the retail category includes Commercial-Industrial (C-M) and General Business (C-2) zoning and the light industrial category is Light Industrial zoning (M-1).

² Irvine Ranch Water District 2002.

³ Sanitation Districts of Los Angeles County.

⁴ Wastewater generation is estimated as 70 percent of water demand.

the Pacific Ocean through a pipeline 200 feet below the surface on the ocean floor, approximately four miles off the coast of Huntington Beach.

Project Wastewater Generation

Forecast wastewater generation by the proposed project, compared to estimated wastewater generation by existing uses onsite, is shown above in Table 7. The project would generate approximately 52,373 gallons more wastewater per day than existing uses on the site. There is sufficient wastewater treatment capacity in the region for the estimated wastewater generation by the project. The proposed project would not require new or expanded wastewater treatment facilities; therefore, impacts would be less than significant and no further analysis is required (McNelly 2010).

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. The majority of the project site is currently covered with impervious surfaces, including buildings, parking lots, roadways, and walkways. All stormwater runoff from the project site flows across paved surfaces to the catch basins at the south end of the site. The existing onsite storm drain system consists of two catch basins at the intersections of Moran Street and Bishop Place, and the Asian Garden Mall exit and Bishop Place. Stormwater that flows into these two catch basins drains to storm drains that run south to the East Garden Grove Wintersburg Channel, which drains southwest to the Ocean View Channel, then drains west to the Pacific Ocean. The Saigon Villas, on the southeast corner of the project site, drains separately to the East Garden Grove Wintersburg Channel.

Long-term operational impacts on stormdrains are not anticipated because the project would not increase the amount of impervious surfaces on the site, and therefore would not increase the amount of stormwater runoff from the site. Existing stormdrains are adequately sized to convey stormwater from the site and surrounding community, therefore stormdrains are anticipated to be appropriately sized for future project buildout. Improvements may be needed to upgrade the existing storm drain system; however the system does not require new facilities or expansion of existing facilities to convey project-related future flows. No significant environmental effects would occur from construction of new or expanded storm drain facilities.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less than Significant Impact. Water supplies available in the City of Westminster, and forecast project water demands, are described above in Section 4.17.b. There are sufficient water supplies to meet the estimated full buildout project-related water demands (Miller 2010). Project-related water supply impacts would be less than significant and no further analysis is required.

e) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. The OCSD would have capacity to treat the project-generated wastewater. The proposed project would generate approximately 52,373 additional gallons of wastewater per day. The two treatment plants that would serve the proposed project have a combined total capacity of 372 mgd. Plant No. 1 has a maximum capacity of 204 mgd and treats an average of 86 mgd. Plant No. 2 has a maximum treatment capacity of 168 mgd and an average treatment flow rate of 124 mgd (McNelly 2010). The addition of 52,373 gallons of wastewater per day would be within the capacity of these two treatment



plants. Project-related wastewater treatment capacity impacts would be less than significant and no further analysis is required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Nonrecyclable and recyclable solid waste collection in the City of Westminster is provided by the MCSD. Solid waste services in the project area are provided by Rainbow Disposal, as contracted through the MCSD.

Landfills for Orange County cities are operated by the Orange County Integrated Waste Management Department (IWMD). The majority of waste generated by the proposed project will be transferred to the Frank R. Bowerman Landfill in Irvine, Olinda Alpha Landfill in Brea, or the Prima Deshecha Landfill in San Juan Capistrano. Capacities and estimated closing dates of the three landfills operated by the IWMD are shown in Table 8.

Table 8 Landfill Capacity				
Location	Remaining Capacity	Maximum Permitted Disposal Rate (tons per day)	Estimated Closing Date	
Irvine	59,411,872 cubic yards (31,666,528 tons)	8,500	2022	
Brea	38,578,383 cubic yards (20,562,278 tons)	8,000	2013	
San Juan Capistrano	87,384,799 cubic yards (46,576,098 tons)	4,000	2067	
Total	185,375,054 cubic yards (98,804,904 tons)	20,500	-	
	Irvine Brea San Juan Capistrano	Location Remaining Capacity Irvine 59,411,872 cubic yards (31,666,528 tons) Brea 38,578,383 cubic yards (20,562,278 tons) San Juan Capistrano 87,384,799 cubic yards (46,576,098 tons) Total 185,375,054 cubic yards	Landfill Capacity Maximum Permitted Disposal Rate (tons per day)	

Table 9 shows solid waste generation rates by type of land use. The rates are based on identified solid waste generation for several different projects and averaged to obtain the rate for the Moran Street Specific Plan project.

Table 9 Solid Waste Generation Rates				
Land Use	Rates	Converted Rates (lb/SF/day)	Averaged rates	
	0.006 lb/SF/day	0.006		
Commercial-Industrial	0.046 lb/SF/day	0.046	0.017	
(Existing: predominantly retail and community commercial) ¹	2.5 lb/1000SF/day	0.0025	0.017	
•	0.0024 ton/SF/year	0.013		
Light Industrial	0.9 lb/100SF/day	0.009	0.004	
(Existing: predominantly auto service businesses) ²	0.0108 ton/SF/yr	0.059	0.034	
General Business (Existing: predominantly small retail) ¹	See Commercial- Industrial above		0.017	
	6 lb/1000SF/day	0.006		
Office	0.006 lb/SF/day	0.006	0.047	
(Proposed)	0.0108 ton/SF/yr	0.059	0.047	
	11.5 lb/100SF/day	0.115		
		Rates in lb/unit/day		
	4 lb/unit/day	4		
Residential	8.6 lb/unit/day	8.6		
(Proposed: multifamily)	3.6 lb/unit/day	3.6	5.6	
	5.31 lb/unit/day	5.31		
	1.17 ton/unit/yr	6.4]	
	4 lb/room/day	4		



Source: CalRecycle 2009.

Notes

Hotel

(Proposed)

(hotel/motel)

2 lb/room/day (hotel)

2 lb/room/day

(hotel/motel)

2

2

3.0

¹ The rates used for Commercial-Industrial and General Business land use designations are based on the commercial retail category of the commercial table of the CalRecyle estimated solid waste generation rates.

² The rates used for the Light Industrial land use designation is based on the auto service category of the commercial table of the CalRecyle estimated solid waste generation rates.

Table 10 shows solid waste generation at project buildout compared with estimated solid waste generated by existing land uses onsite.

	Table 10		
	Solid Waste Ger	neration	
		Solid Waste Generation (Pounds per Day)
Land Use	Units	Per Unit	Total
Existing Uses			
Commercial-Industrial	172,080 SF	0.017	2,925
Light Industrial	93,050 SF	0.034	3,164
General Business	33,600 SF	0.017	571
		Total	6,660
Proposed Uses			
Retail	139,600 SF	0.017	2373
Office	38,400 SF	0.047	1,814
Hotel	120 rooms	3.0	360
Residential	215 units	5.6	1,204
		Total	5,751
		Net Change	(909)

Waste would be picked up and transported by Rainbow Disposal to its privately owned material recovery facility in Huntington Beach. In accordance with AB 939, recyclable materials and green waste are removed from the waste stream and the overall trash volume is reduced by approximately 50 percent. Upon removal of all recyclable material, the loads are transported to the Bowerman Landfill in Irvine. The Bowerman facility is located at 11002 Bee Canyon Access Road and is permitted until 2022. The Bowerman facility accepts only municipal solid waste from commercial haulers and vehicles operating under commercial status. The Bowerman facility also has adequate capacity and other facilities are available for disposal.

As shown above in Table 10, the Specific Plan at buildout is estimated to generate a reduction of approximately 909 pounds of solid waste per day compared to existing land uses onsite. Therefore, impacts would be less than significant and no additional analysis is required.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. All local governments, including the City of Westminster, are required under Assembly Bill 939 (AB 939), the Integrated Waste Management Act of 1989, to develop source reduction, reuse, recycling, and composting programs to reduce tonnage of solid waste going to landfills. In 2006, the latest year for which data are available, 58 percent of solid waste generated in the City of Westminster was diverted, so the City is meeting its AB 939 goal (CalRecycles 2010).

City standards state, "areas for refuse and recyclable material storage shall be adequate in capacity, number, and distribution to serve the development...." The project would comply with all City standards for adequate number of trash bins. Compliance with regulations related to the City recycling programs and the Source Reduction and Recycling General Plan Element is required (Westminster 1996).

h) Result in an inefficient use of energy?4

Less Than Significant Impact. The proposed project would not result in an inefficient use of energy. Federal and state agencies regulate energy use and consumption through various regulations and programs. At the state level, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are two agencies with authority over energy use and conservation. The CPUC regulates privately owned utilities and the CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards.

Title 24, part 6 of the California Code of Regulations, known as the California Building Standards Code was established by the CEC in 1978. The Energy Efficiency Standards for Residential and Nonresidential Buildings outlined in this code were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The most recent update (2008 Building and Energy Efficiency Standards) became effective January 1, 2010 (CEC 2010). The new 2008 standards are approximately 15 percent more energy efficient than the previous 2005 standards. All new buildings must be built to these standards.

Compliance with the 2008 standards is enforced by local city or county governments (CEC 2009). When the project's building plans are submitted for City approval, the City conducts a review of the energy conservation features, such as insulation, energy-efficient HVAC systems, and energy-efficient indoor and outdoor lighting to ensure compliance with the latest building code standards. Adherence to these standards would increase the building efficiency performance of the project.

Depending on when each component of the proposed project is constructed, each building would comply with the current California Building Standards Code. Under the proposed Specific Plan, the project area would be transformed through demolition and replacement of existing buildings over time. New buildings would have an increased energy efficiency compared to the existing buildings. Therefore, project-related energy efficiency impacts would be less than significant and no further analysis is required.

4.18 MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact. The proposed project would not substantially reduce the habitat of a fish or wildlife species, cause drops in wildlife populations, threaten to eliminate plant or animal communities, or restrict endangered plant or animal ranges. The proposed project site is heavily urbanized and developed with retail, office, and industrial land uses. The only areas that offer vegetation or open space are areas of ornamental landscaping along buildings and in parking lots. These areas are not natural plant communities



⁴ Appendix F of the CEQA Guidelines "...requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy" (Public Resources Code section 21100(b)(3); CEQA Guidelines, Appendix F, 2010). Although it is not included on the Appendix G Checklist of the CEQA Guidelines, the discussion of the proposed project's energy usage is added here to meet the Appendix F requirements.

and are too small and fragmented to support substantial numbers of endangered or rare species. The project-related impacts to biological communities and wildlife species would be less than significant.

The site does not contain any known resources from California's history or prehistory, and development in accordance with the proposed specific plan would have less than significant impacts on cultural, paleontological, and historical resources. Project-related impacts to history or prehistory are less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Potentially Significant Impact. The development of the project site in combination with past, present, and future development and growth in the City of Westminster would create potential for cumulatively considerable impacts. The proposed project would have potentially significant impacts in the following categories: air quality, greenhouse gas emissions, noise, and transportation and traffic. The project-specific potential impacts of the proposed project may be cumulatively considerable when they are compounded with potential impacts of other projects in the City. Project-related cumulatively considerable impacts are potentially significant and cumulative impacts will be addressed in the EIR.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. The proposed project would have potentially significant impacts in the following categories: air quality, greenhouse gas emissions, noise, and transportation and traffic. Impacts in these categories would have direct and/or indirect effects on humans living or working in the project area and surrounding communities. Project-related impacts on human beings are potentially significant and adverse effects will be addressed in the EIR.

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- Miller, Scott (Superintendent). City of Westminster Water Division. 2010, February 23. Written response to questionnaire.
- Panella, Al (Lieutenant). Westminster Police Department. 2010, February 22. Written response to questionnaire.

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Appendix A
Recirculated Initial Study and Proposed Mitigated
Negative Declaration for the Moran Senior
Condominiums



Appendix

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The Planning Center April 2010

MND 04-01 Recirculated Initial Study and Proposed Mitigated Negative Declaration for the Moran Senior Condominiums (#2003-78)

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Mitigated Negative Declaration

City of Westminster Moran Senior Condominiums

Introduction

The applicant, Moran Property Limited Partnership, is proposing to construct the Moran Senior Condominiums in the heart of the Little Saigon Community Plan Area, at the southeast corner of Bishop Place and Moran Street, in the City of Westminster, Orange County, California. This Mitigated Negative Declaration (MND 04-01) has been prepared based on the assessment presented in the Initial Study.

Project Description

The project site consists of five parcels totaling approximately 2.37 acres. A tentative tract map will merge the five parcels and subdivide them into condominiums. The project site currently consists of a fairly level vacant dirt lots. The applicant/property owner, Moran Property Limited Partnership, is proposing to construct condominium units that would be offered for sale to the 55-and-older population.

The project would involve the development of a condominium building with a total of 80 units and an approximately 2,100-square-foot multi-purpose room. The building would vary in height, with 16 units on the first level, 27 units on the second level, 29 units on the third level, and eight units in the two four-story towers. The maximum building height would be approximately 60 feet. The 80 units would include 40 two-bedroom, 1040-square-foot units; 6 two-bedroom, 1148-square-foot units; 15 one-bedroom, 850-square-foot units; and 19 one-bedroom, 875-square-foot units. Additionally, a courtyard and cultural garden are proposed.

Paid public parking and segregated residential parking for the unit owners would be provided on two levels below the building. The first level of parking would be 6 feet below ground level. The project would provide a maximum of 120 paid public parking spaces and 162 residential and guest parking spaces.

Because the project site is located within the Little Saigon Community Plan Area, the condominium building is required to be designed and built to comply with Little Saigon Community Plan Area Design Standards. According to these standards, new development will "incorporate architectural elements similar to those found on buildings constructed in Vietnam in the early 1900's in the

French Colonial tradition." The basic theme includes elements such as large overhanging tile roofs with eave brackets, use of columns, and bright accent colors, and smooth finish stucco exteriors. A detailed description of the project is provided in Chapter 2 of the Initial Study.

The project proposal also requires several discretionary actions by the City, including:

- Rezone the site's current designation of C-M (Commercial-Industrial) to an R-5-P zone (Multiple Units, 19 to 24 Units/Acre, Parking Overlay). The "P" parking overlay would allow nonresidential parking on the site.
- Five variances:
 - □ Building Height. The municipal code for condominiums specifies a 35-foot height and two-story maximum. Along the outside edge of the property, the building would be three stories high with two towers with residential units that would be four stories high. In addition, the peak of the roof extends to approximately 60 feet.
 - □ <u>Lot Coverage</u>. The parking structure occupies more than 60% of the site, which is the maximum for an R-5 zone.
 - □ Enclosed Retail Parking. The municipal code specifies "open air" temporary parking of automobiles within a Parking Overlay District. A variance is needed to enclose the parking stalls.
 - □ 200 parking spaces are required for condominiums, and the variance would allow 162 parking spaces.
 - □ A variance is needed to allow the use of tandem parking for 34 of the required parking spaces.
- Tentative Tract Map Condominium Purposes.
- Site plan review for compliance with the City's zoning limitations.
- Design review of the building's architecture for compliance with the City's design standards.
- Affordable Housing Agreement between the City and project applicant.
- Conditional use permit to allow senior citizen housing in an R-5 residential zone.
- Development incentive density bonus to allow a higher density than permitted by the R-5 zone.

Availability of Documents

Copies of the Initial Study/Proposed Mitigated Negative Declaration for the Moran Senior Condominiums is on file and available for review at the following location:

Westminster City Clerk's Office 8200 Westminster Boulevard Westminster, CA 92683

Environmental Determination

An Initial Study was prepared to identify the potential effects on the environment from the construction and occupation of the proposed residential development and to evaluate the significance of these effects. Based on the Initial Study, the proposed project would have less-than-significant effects or no impacts related to the following issues:

- agricultural resources,
- biological resources,
- hazards and hazardous materials,
- land use and planning,
- mineral resources.
- population and housing,
- recreation, and
- utilities and service systems.

The environmental assessment presented in the Initial Study identifies a number of environmental impacts that would be potentially significant unless mitigation measures are incorporated into the project. These are:

- aesthetics,
- air quality,
- cultural resources,
- geology and soils,
- hydrology and water quality,
- noise,

- public services, and
- transportation and traffic.

Mitigation measures have been recommended to effectively minimize all of the potentially significant environmental impacts identified in the Initial Study. Incorporation of the recommended mitigation measures into the project would avoid or reduce potentially significant impacts to less-than-significant levels.

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Chapter 1 **Introduction and Overview**

Introduction and Overview

Overview

On March 1, 2004, the City of Westminster (City) released the Moran/Bishop Senior Housing Complex Initial Study and Proposed Mitigated Negative Declaration (IS/MND) 04-01 for the required 20-day public review. No public or agency comments were received, and the IS/MND was considered by the City of Westminster Planning Commission at a public meeting on March 24, 2004. During that meeting, members of the Planning Commission requested that the project applicant revise the project design to accommodate an increase in the number of parking spaces and landscape space. In complying with this request, the applicant substantially revised the original project. Based on the magnitude of these revisions, the City is required to recirculate the IS/MND to comply with the California Code of Regulation (CCR) (Title 14, Chapter 3, Article 6, Section 15073.5), which states:

- (a) A lead agency is required to recirculate a negative declaration when the document must be substantially revised after public notice of its availability has previously been given pursuant to Section 15072, but prior to its adoption. Notice of recirculation shall comply with Sections 15072 and 15073.
- (b) A "substantial revision" of the negative declaration shall mean:
 - (1) A new, avoidable significant effect is identified and mitigation measures or project revisions must be added in order to reduce the effect to insignificance, or
 - (2) The lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required.

The Moran/Bishop Senior Housing Complex Project was revised to such an extent that new, avoidable significant impacts were identified and additional mitigation measures are needed to reduce these impacts to less-than-significant levels. Therefore, the IS/MND must be recirculated before it can be adopted. This requirement ensures that the public and government agencies have the opportunity to comment on the revised document.

This revised project is mainly different from the original project in that the new project includes:

- one three-story building with two four-story corner tower sections instead of four two-story buildings,
- condominiums for sale instead of apartments for rent,
- an increase in open landscape area,
- double the number of parking spaces for residents, and
- residential parking and paid public parking in a subterranean garage.

The City prepared this Recirculated IS/MND to evaluate the potential environmental consequences associated with the revised project, which involves the construction of the Moran Senior Condominiums. The new project would include a building with 80 condominium units offered for sale to the 55-years-and-older population and a 2,100-square-foot multi-purpose room. The project site comprises five parcels totaling approximately 2.37 acres (103,500 square feet), and is currently vacant. The project site is in the heart of the Little Saigon business district in Westminster, at the southeast corner of Bishop Place and Moran Street.

Authority

As part of the City's permitting process, the proposed project is required to undergo an environmental review pursuant to the California Environmental Quality Act (CEQA). This Initial Study is a preliminary analysis prepared by the City (as the lead agency) to determine whether an Environmental Impact Report or a Negative Declaration is required. If the Initial Study concludes that the project may have a significant effect on the environment, an Environmental Impact Report must be prepared. Otherwise, a Negative Declaration or Mitigated Negative Declaration (MND) is prepared. The information in the Initial Study-related special studies supports the conclusions made in the MND.

The preparation of an IS/MND is governed by two principal sets of documents: CEQA (Public Resources Code Section 21000, et seq.) and the State CEQA Guidelines (CCR Section 15000, et seq.). Specifically, Section 15063 of the State CEQA Guidelines and CCR Article 6, Sections 15070–15075 guide the process for the preparation of a Negative Declaration or MND. Additionally, Article 6, Section 15073.5 outlines requirements for recirculation of a Negative Declaration or MND. Where appropriate and supportive to an understanding of the issues, reference will be made either to the statute, the State CEQA Guidelines, or appropriate case law.

As required by CEQA, this Recirculated IS/MND contains a project description, a description of the environmental setting, potential environmental impacts, mitigation measures for any significant effects, consistency with plans and policies, and names of preparers.

The mitigation measures included in this Recirculated IS/MND are designed to reduce or eliminate the potentially significant environmental impacts described herein. Where a mitigation measure described in this document has been previously incorporated into the project, either as a specific feature of design or as a mitigation measure, this is noted in the discussion. Mitigation measures are structured in accordance with the criteria in Section 15370 of the State CEQA Guidelines.

Scope of the IS/MND

This Recirculated IS/MND evaluates the proposed project's effects on the following resource topics:

- aesthetics,
- agricultural resources,
- air quality,
- biological resources,
- cultural resources,
- geology and soils,
- hazards and hazardous materials,
- hydrology and water quality,
- land use planning,
- mineral resources,
- noise,
- population and housing,
- public services,
- recreation,
- transportation/traffic, and
- utilities and service systems.

Impact Terminology

The following terminology is used to describe the level of significance of impacts:

- A finding of *no impact* is appropriate if the analysis concludes that the project would not affect the particular topic area in any way.
- An impact is considered *less than significant* if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that it would cause no substantial adverse change to the environment with the inclusion of environmental commitments or other enforceable measures that have been agreed to by the applicant.
- An impact is considered *potentially significant* if the analysis concludes that it could have a substantial adverse effect on the environment. For the proposed project, no impacts were determined to be potentially significant.

Recirculated IS/MND Organization

The content and format of this report are designed to meet the requirements of CEQA. This Recirculated IS/MND consists of the proposed findings that the project, as mitigated, would have no significant impacts. The bulk of this document consists of the Initial Study and supporting studies. The Initial Study contains the following sections.

- Chapter 1, "Introduction," identifies the purpose and scope of the Initial Study and the impact terminology used throughout the document.
- Chapter 2, "Project Description," identities the location, background, and planning objectives of the project and describes the proposed project in detail.
- Chapter 3, "Environmental Checklist and Analysis," presents the checklist responses for each resource topic. This section includes a brief setting section for each resource topic and identifies the impacts of implementing the proposed project.
- Chapter 4, "Proposed Mitigation Measures," summarizes recommended mitigation measures identified in Chapter 3.
- Chapter 5, "References," identifies all printed references and individuals cited in this Initial Study.
- Chapter 6, "Report Preparation," identifies the individuals who prepared this Initial Study and their areas of technical specialty.
- Chapter 7, "Mitigation Reporting Plan," presents monitoring and reporting procedures and a table that outlines the Mitigation Monitoring Plan for the project.

Appendices present data supporting the analysis or content of this Recirculated IS/MND. The appendices are as follows:

- Appendix A. Revised Air Quality Study,
- Appendix B. Cultural Resources Study,
- Appendix C. Revised Noise Study, and
- Appendix D. Revised Traffic Impact Study.

Chapter 2 Project Description

Project Description

Introduction

This chapter describes the project location, existing conditions of the project site and surrounding areas, characteristics of the proposed project, and local policies that relate to the project. All figures showing project location, aerial and site photographs, site plans and elevations, and general plan and zoning maps are located at the end of this chapter.

Project Location and Existing Conditions

Local and Regional Setting

The proposed project site is in the southeastern portion of the City of Westminster in Orange County, California. Figure 2-1 illustrates the regional location of the project site. Major roadways in the area include Bolsa Avenue to the north, Magnolia Street to the west, Edinger Avenue to the south, and Brookhurst Street to the east. The San Diego Freeway (Interstate 405) is approximately 1.5 miles southwest, and the Garden Grove Freeway (State Route 22) is 1.5 miles north. The project site is in the heart of the Little Saigon business district in Westminster, at the southeast corner of Bishop Place and Moran Street. Figure 2-2 shows the local vicinity of the project site.

Physical Setting and Surrounding Land Uses

The project site consists of five parcels totaling approximately 2.37 acres (103,500 square feet), and is currently vacant. According to City building records, this site had never been developed; however, it may have been used for agricultural row crops in the past. In the recent past, the project site was used for overflow parking for the commercial uses along the west side of Moran Street. Figure 2-3 illustrates the boundaries of the project site and surrounding land uses. Photos of the project site are shown in Figures 2-4 and 2-5. Currently, a chain-link fence surrounds the site and access is not permitted.

The project area is generally characterized by a variety of urban land uses, including residential and commercial. The following are descriptions of the land uses surrounding the project site:

- Commercial uses, including retail stores and several auto service shops, are located directly west along Moran Street. A large restaurant and more auto service shops are located north of the project site along the west side of Moran Street.
- The Bolsa Verde Estates Mobile Home Park is located to the east, adjacent to the site. A 6-foot-high block wall separates the mobile homes from the project site. There are single-family residential uses to the south along Coronet Avenue. These homes back up to Bishop Place and are separated from the street by a 6-foot-high block wall.
- Four vacant dirt lots are located to the north, adjacent to the project site.

 These lots are currently being used for overflow parking for the commercial uses along the west side of Moran Street and the Asian Garden retail stores.

Proposed Project

The project site consists of five parcels totaling approximately 2.37 acres. A tentative tract map will merge the five parcels into one and subdivide them into condominiums. The project site currently consists of a fairly level vacant dirt lot. The applicant/property owner, Moran Property Limited Partnership, is proposing to construct condominium units that would be offered for sale to the 55-years-and-older population. The condominium building would have a total of 80 units and an approximately 2,100-square-foot multi-purpose room. There would be 16 units on the first level, 27 units on the second level, 29 units on the third level, and eight units in the two four-story towers.

The building would vary in height, with a maximum height of approximately 60 feet. The 80 units would include 40 two-bedroom, 1040-square-foot units; 6 two-bedroom, 1148-square-foot units; 15 one-bedroom, 850-square-foot units and 19 one-bedroom, 875-square-foot units. A courtyard and cultural garden are proposed (see landscaping section below). The development would accommodate between 126 (one person per bedroom) and 252 people (two people per bedroom).

Because the project site is located within the Little Saigon Community Plan Area, the condominium building is required to be designed and built to comply with Little Saigon Community Plan Area Design Standards. According to these standards, new development will "incorporate architectural elements similar to those found on buildings constructed in Vietnam in the early 1900's in the French Colonial tradition." The basic theme includes elements such as large overhanging tile roofs with eave brackets, use of columns and bright accent colors, and smooth finish stucco exteriors.

Street Improvements

As part of the project, several other improvements would be undertaken. Moran Street and Bishop Place would include the following improvements:

- a new curb and gutter along the street,
- a new 5-foot-wide sidewalk adjacent to the street,
- a 15-foot landscape edge between the sidewalk and the front of the new condominium building,
- City-approved street trees planted in deep-root control boxes with irrigation in landscape edge,
- street paving to the centerline of the street, and
- a handicapped ramp from the street to the sidewalk at the corner of Bishop Place and Moran Street.

Parking

Parking would be provided for residents and for retail customers on two levels below the building. The project would provide a maximum of 120 retail parking spaces and 162 residential and guest parking spaces.

Below-Grade Parking

The below-grade level of parking would be 6 feet below the ground surface, and would consist of up to 120 retail parking stalls and approximately 44 stalls for residents and guests. The retail and residential/guest parking areas would be separated by a floor-to-ceiling fence. A ramp would connect the residential below-grade parking to the residential parking on the first level. This ramp would not be accessible from the retail parking.

Retail paid parking spaces would be accessed directly from Moran Street down a short ramp. Pedestrian access for the retail parking would be from stairs in three locations. One staircase would be located on the west side near the center of the garage, and would exit directly to Moran Street. This stairway would continue through a locked gate up to the three levels of the condominium building. A walkway would lead pedestrians from the front of the building through the landscape edge to the sidewalk. The other two staircases would be located on the east side of the garage, with one in the north corner and one in the south corner of the garage. Each would have a walkway that would lead to the sidewalk from the north stairs along the driveway around the back and north side of the building to Moran Street, and from the south stairs along the driveway to Bishop Place. An elevator would be located adjacent to the Moran Street stairway on the west side of the building and would carry pedestrians from the

below-grade parking level, up half a level, to the street. Retail parking users would be prohibited from entering the condominium level.

Residential/guest parking spaces would be accessed from driveways on Bishop Place and Moran Street. Vehicles from Bishop Place would travel up a ramp at the back of the building (east side); vehicles from Moran Street would travel along the north side and up a short ramp on the east side of the building before entering on the first floor of the parking garage. Once inside the garage, vehicles would travel from the first-level parking down another ramp to the below-grade level.

Pedestrian access would be via stairs and an elevator. Two stairways on the east side of the garage, with one in the north corner and one in the south corner of the residential parking area, would lead pedestrians to each floor of the building. An elevator would be located between parking spaces along an interior fence that separates the retail and residential parking areas. The elevator would make stops on each level of the building. Both elevators (retail and residential/guest) would be gurney-sized to allow for emergency transport.

First-Level Parking

The first level of parking would be 6 feet above the ground surface and would provide 118 spaces for residents and guests only; it would not have retail parking. These residential/guest parking spaces include 92 in the parking garage (34 of these are assigned tandem spaces that are stacked two spaces deep), and 26 uncovered spaces along the east property line.

Residential/guest parking spaces would be accessed from Moran Street and Bishop Place ramps. These ramps would enter the parking garage from the back of the building, separate from the retail parking access. All residential vehicle traffic would enter through the first level of parking.

Pedestrian access would be via the same stairs and elevator as described for the below-grade level residential parking. From the Moran Street staircase, residents would enter by key and travel up half a flight of stairs to reach each level of the condominium building.

Vehicle Access Control

Access to the paid retail parking would be controlled by a tollgate at the entrance on Moran Street. The exact configuration of this gate and collection system is currently being developed.

Access to the residential/guest parking would be controlled by four gates (two gates for the parking garage and two for the drive aisle and individual private garages). The gates are located on the first level and opened by residents and emergency personnel via individual remote-control units. Guests would enter the

structure by telephoning residents from an intercom and having the gate opened for them via remote control.

Fencing and Walls

Decorative painted metal grills would enclose the below-grade level on Moran Street and Bishop Place. The grills would be located on the upper portion of the exterior walls to provide ventilation, light, and security. Pedestrian gates would be provided at all points of connection to the building, and mechanical metal vehicular gates would be provided at the cul-de-sacs at the back of the building. A new 6-foot-high concrete block wall would be constructed adjacent to the mobile home park along the east side of the site and adjacent to the vacant parcel along the north side of the site.

Landscaping

Landscape (including trees, shrubs, and lawn) and hardscape (including planters and enhanced paving) are proposed around the outside of the building and within the two interior patio/courtyard areas.

A 40-foot by 140-foot cultural garden would run between the building and Bishop Place. The garden would include an Asian-themed pavilion and landscaping. The project would also provide a 10-foot landscape setback along Moran Street: 10 feet along the northern property line and 9 feet along the eastern property line. On the second level of the building, above the parking garage, an open-air recreation area and a separate courtyard are proposed. The 100-foot by 140-foot patio area would consist of amenities such as a shade structure, water feature, hardscaping, barbeques, landscaping, and lawn. A 40-foot by 95-foot courtyard in the northern section of the building would include a water feature, benches, and a walking path.

The total landscape area and allowable hardscape area would be 21% of the project site, with approximately 20,000 square feet of landscaping and approximately 2,000 square feet of decorative hardscape.

Signage

One monument sign would be located at the corner of Bishop Place and Moran Street. This sign would comply with City sign ordinances and would match the architecture of the building.

Lighting

Lighting would include shielded security lights along the building walls, as well as in all garden/patio/courtyard areas. All parking garage areas would have adequate security lighting. Lights would also be located along the east and north sides of the site in the driveways and parking area. As a standard condition of project approval, these lights would be shielded to prevent light spill outside the project site.

Solid Waste Disposal and Recycling

Two trash chutes would be located at the two staircases on each end of the building. The trash chutes would allow residents from all levels of the building to dispose of trash and recycling. Each chute would terminate in trash bins at the below-grade parking level. Management would transport these rolling bins to a collection point on site for haul and disposal. In compliance with City standards, "areas for refuse and recyclable material storage shall be adequate in capacity, number, and distribution to serve the development."

Construction

As the project site is currently vacant, construction activities associated with the project would include site grading and building erection. Grading of the project site would involve the export of approximately 13,900 cubic yards of earth. Construction activities would include construction of building structures, walls, and fences; installation of hardscape and landscape areas, new curbs, and gutters; and paving of parking areas. Construction of the housing complex would take approximately 8 months to complete, beginning in January 2005.

General Plan and Zoning

The project site currently has a general plan designation of "Planned Development Area D" (Figure 2-10). The Planned Development land use designation provides for mixed- or single-use development, and each designated site has a goal that guides development and use type. Floor area ratios and density limits may be exceeded in the Planned Development Area as long as compliance with performance standard goal provisions is demonstrated (General Plan Policy IIA2-9). The project would be consistent with the Planned Development Area D land use designation. The project site is also within the city redevelopment area. Redevelopment is a major development strategy in Westminster. As of 2001, the redevelopment area encompassed the entire incorporated area of the City.

The project site is also within the Little Saigon Community Plan Area. This area generally falls along both sides of Bolsa Avenue, from Magnolia Avenue to

Ward Street, and totals approximately 305 acres. The City has established Asian-themed design guidelines for new development within this area (City of Westminster 1996).

As provided in the City of Westminster Municipal Code, the zoning designation for the project site is C-M (Commercial-Industrial) (Figure 2-11). As part of the project, the applicant is requesting a zone change from C-M to R-5-P (Multiple Units, 19 to 24 Units/Acre, Parking Overlay). Additionally, a conditional use permit would be required to allow the condominium and townhouse as well as R-5 development standards to be evaluated as to their applicability to and possible modification for senior citizen housing in an R-5 residential zone. These actions would ensure that the project is consistent with the zoning for the site.

Based on the 103,500-square-foot size of the project site (103,613 minus the 113-square-foot City-required dedication of land), the project would provide 1,294 square feet of land area per unit. However, an R-5 residential zone requires a minimum of 1,800 square feet of land per unit, or a maximum of 53 allowable units for the project site. To construct a higher density development on the project site, the developer has proposed that the project exclusively house residents 55 years or older, therefore providing for a density bonus of 25% above the allowable units. This agreement would allow 14 additional units to be developed, for a total of 71 units. The increase in density beyond 67 units would be permitted by the City because the project is consistent with the City's land use designation of Planned Development. This incentive would allow the remaining 9 units to be developed, for a total of 80 units.

Alternative Analyzed

The project applicant has proposed the conceptual project described above. The project applicant is also interested in one potential Alternative Development Scenario for the project site for comparison purposes. The alternative involves additional parking to be provided for retail customers and employees. This extra parking is beyond the 162 spaces designated for the condominium residents and the 120 spaces designated for commercial use in the proposed plan.

This alternative proposes moving 16 condominium units on Level 1 to Level 4. This would create a fourth floor for the entire building instead of two four-story towers. Additionally, it would allow for the provision of approximately 80 or more additional parking stalls to be used by retail customers and employees of the shops located in the nearby Asian Garden Mall. The additional retail parking spaces would be located adjacent to proposed retail parking spaces and would be separated from the residential parking.

For many of the environmental topics, the impacts for this alternative will be similar and will not be differentiated. Chapter 4 provides an analysis of the impacts of the alternative compared to the proposed project for those topics that may be affected.

Summary of Required Approvals

Discretionary Approvals

The project requires the following discretionary actions by the City:

- Rezone the site's current designation of C-M (Commercial-Industrial) to an R-5-P zone (Multiple Units, 19 to 24 Units/Acre, Parking Overlay). The "P" parking overlay would allow nonresidential parking on the site.
- Five variances:
 - Building Height. The municipal code for condominiums specifies a 35-foot height and two-story maximum. Along the outside edge of the property, the building would be three stories high with two four-story towers, containing eight residential units. In addition, the peak of the roof extends to approximately 60 feet.
 - □ <u>Lot Coverage</u>. The parking structure occupies more than 60% of the site, which is the maximum for an R-5 zone.
 - □ Enclosed Retail Parking. The municipal code specifies "open air" temporary parking of automobiles within a Parking Overlay District. A variance is needed to enclose the parking stalls.
 - □ 200 parking spaces are required for condominiums, and the variance would allow 162 parking spaces.
 - □ A variance is needed to allow the use of tandem parking for 34 of the required parking spaces.
- Tentative Tract Map Condominium Purposes.
- Site plan review for compliance with the City's zoning limitations.
- Design review of the building's architecture for compliance with the City's design standards.
- Conditional use permit to allow the condominium and townhouse as well as the R-5 development standards to be evaluated as to their applicability to and possible modification for senior citizen housing in an R-5 residential zone.
- Development incentive density bonus to allow a higher density than permitted by the R-5 zone.

The Alternative Development Scenario would require the same discretionary approvals.

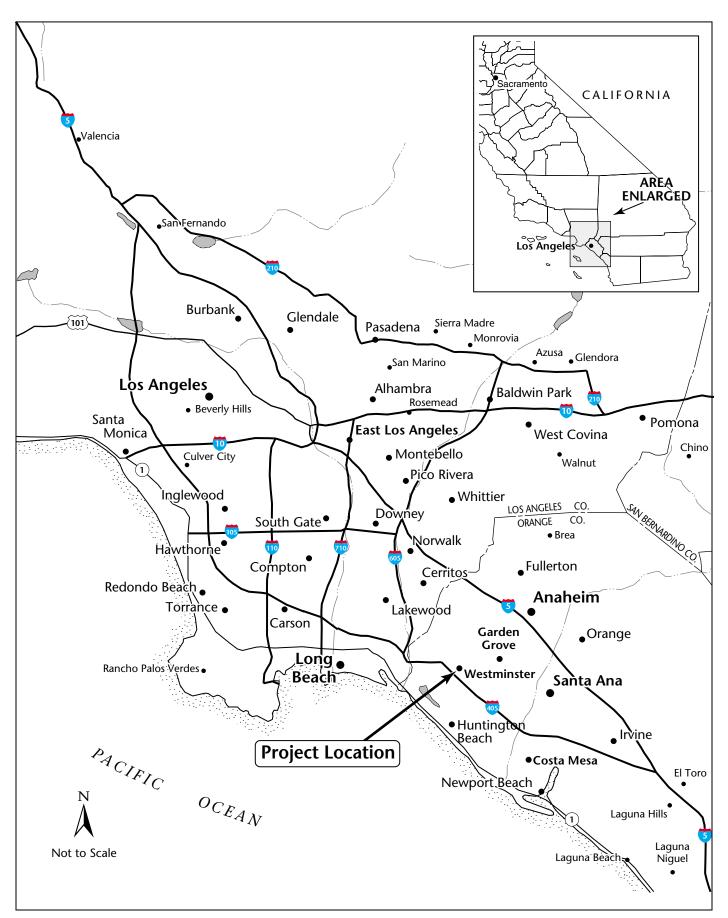
Other Approvals

The project requires the following approvals by the City and other agencies:

■ Final Tract Map for Condominium Purposes;

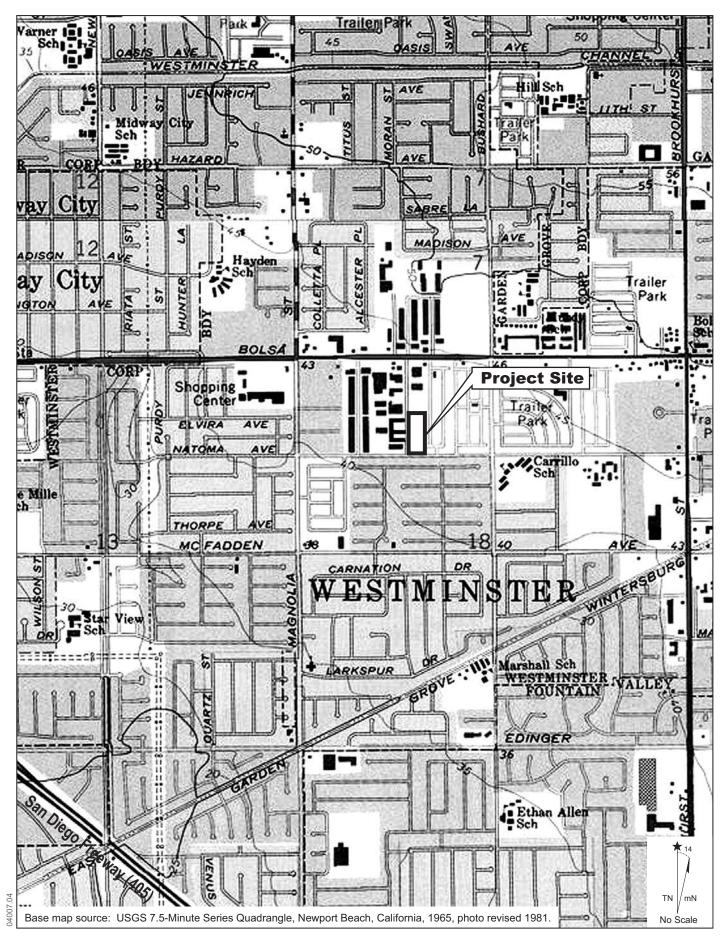
- grading permits for grading the project site (issuance of these permits will be contingent on the City's approval of the grading plans);
- building permits for construction of structures on the project site (issuance of these permits will be subject to the City's approval of the building plans);
- landscape permits for installation of new landscape, new irrigation, and work in the public right-of-way; and
- emergency and fire equipment access and circulation (to be approved by the Orange County Fire Authority).

The Alternative Development Scenario would require the same other approvals.



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Figure 2-1 Regional Location



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Figure 2-2 Local Vicinity



Source: City of Westminster Planning Department 2004.



Photo 3. View looking north along Moran Street near intersection of Bishop Place.



Photo 4. View looking east along Bishop Place

04007.04



Photo 1. View of project site looking northeast from Moran Street.



Photo 2. View of project site looking southeast from Moran Street.



04007.04



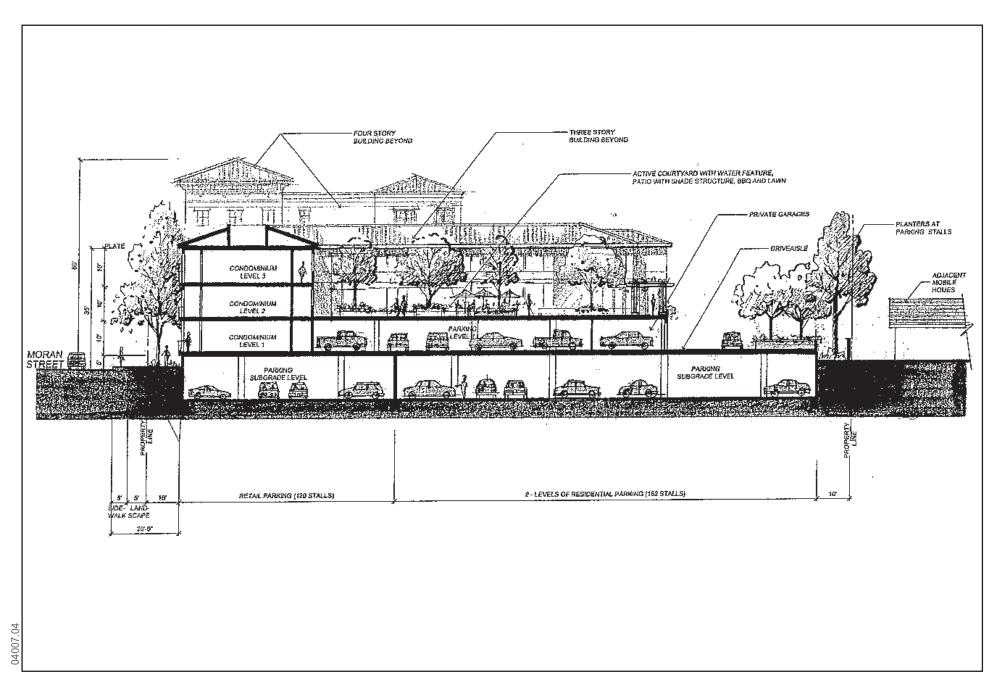




Figure 2-7 Center Section Elevations

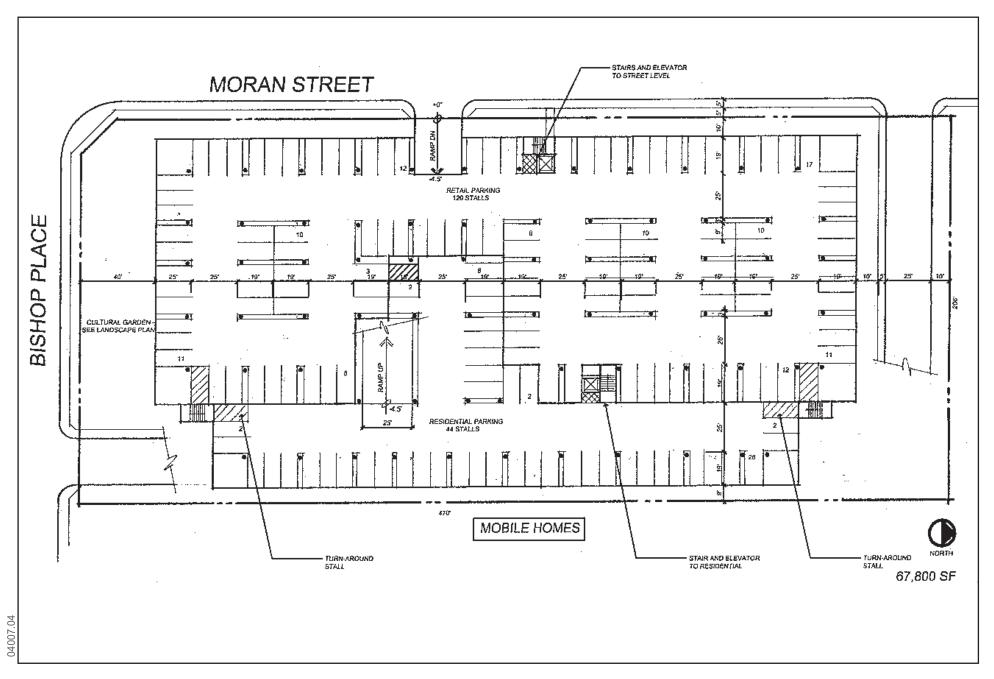
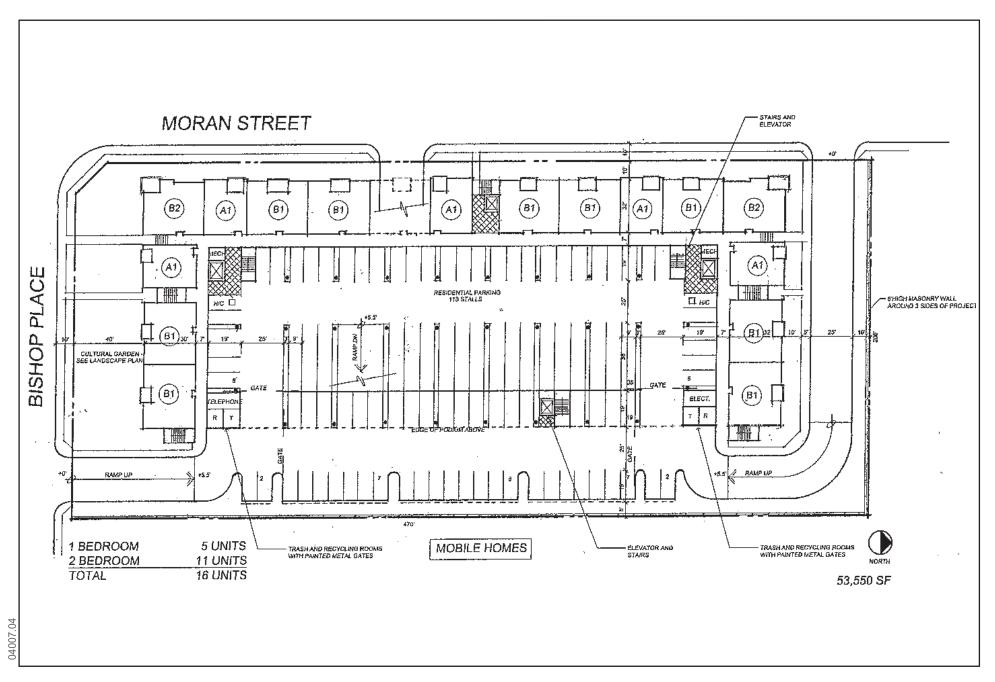




Figure 2-8 Sub-Grade Level Site Plan





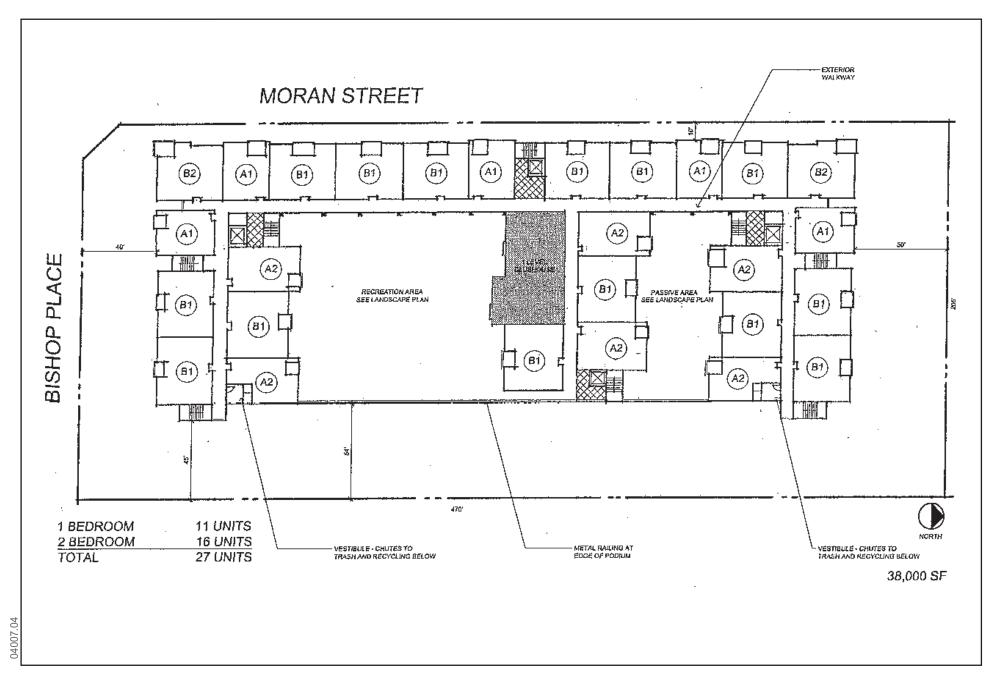




Figure 2-10 Second Level Site Plan

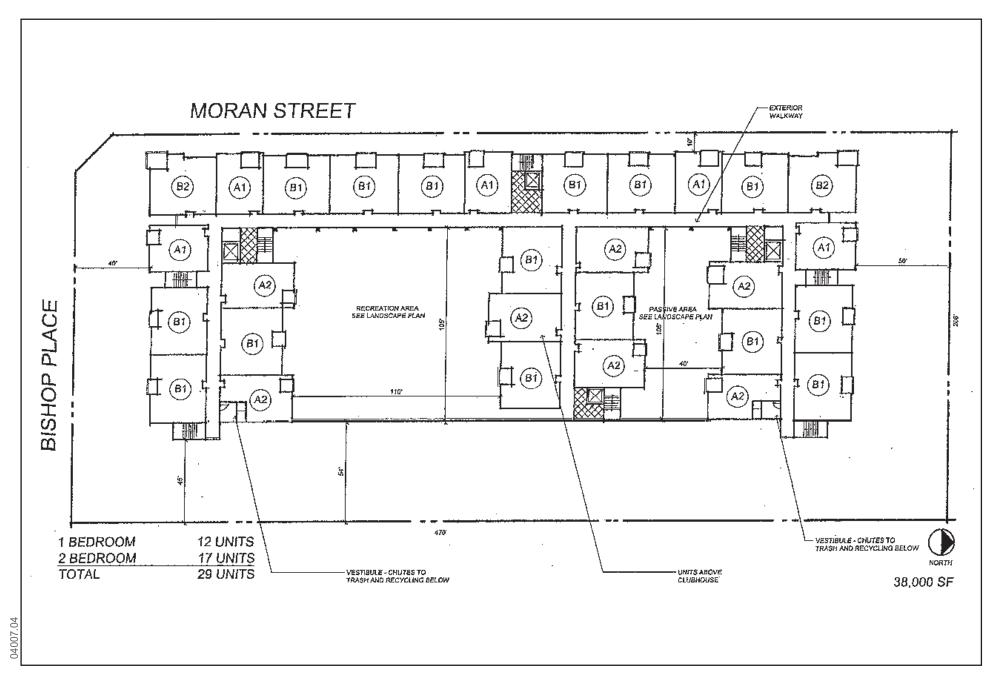




Figure 2-11 Third Level Site Plan

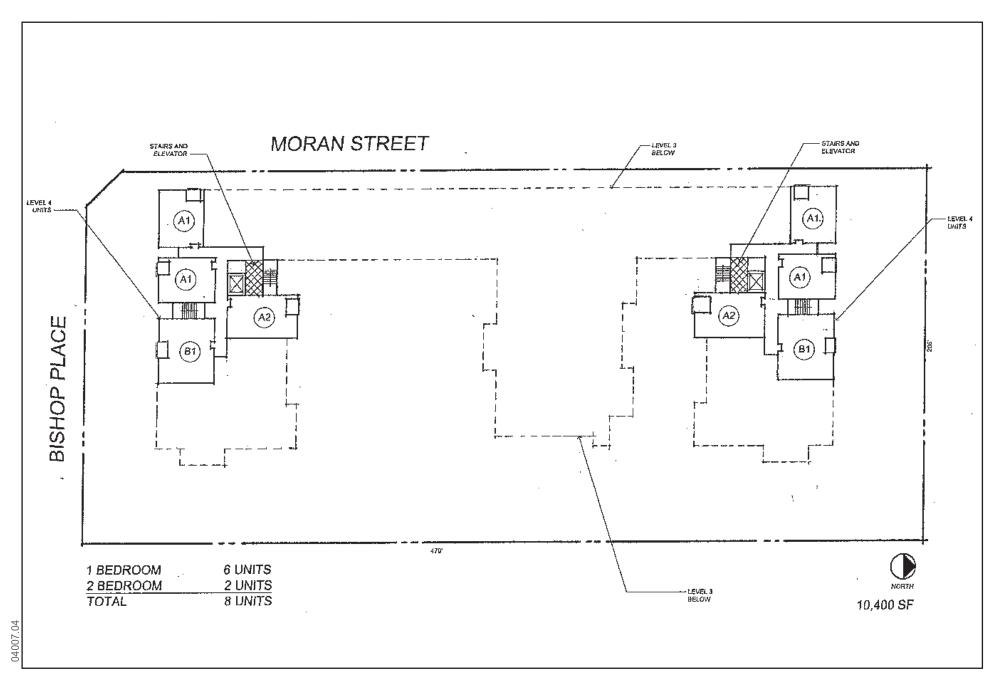




Figure 2-12 Fouth Level Site Plan

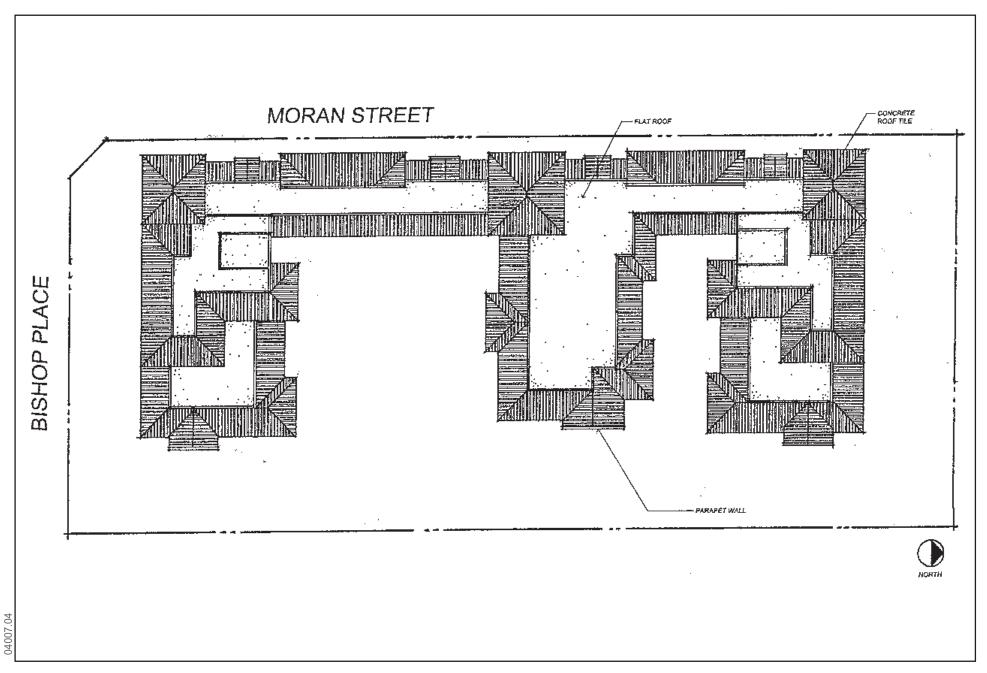


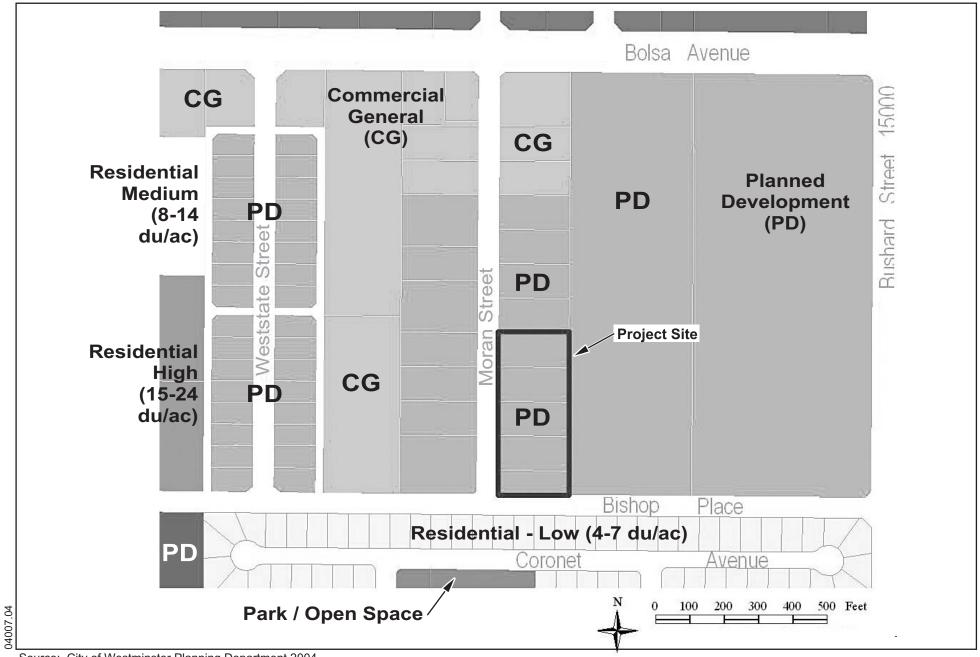


Figure 2-13 Roof Plan

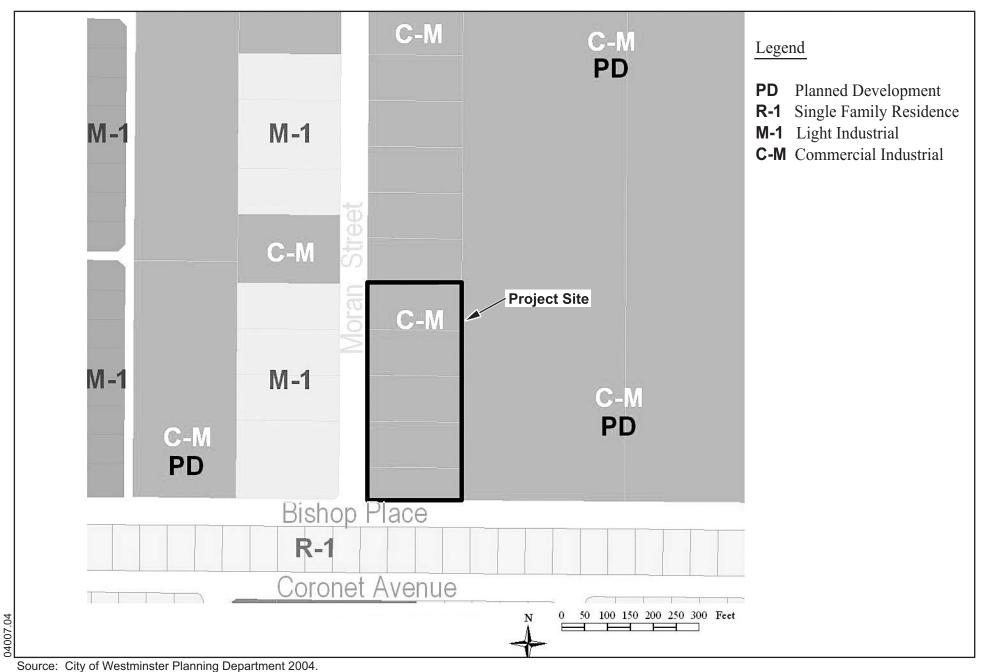


In Stokes Jones & Stokes

Figure 2-14 Unit Plans



Source: City of Westminster Planning Department 2004.



Source. City of Westiminster Flamming Depar

Chapter 3 **Environmental Checklist and Analysis**

Environmental Checklist and Analysis

1. Project Title: Moran Senior Condominiums

2. Lead Agency Name and Address: City of Westminster

8200 Westminster Boulevard Westminster, CA 92683

3. Contact Person and Phone Number: Bonny Lay, Planning Division

(714) 898-3311 ext. 225

4. Project Location: The project site is in the southeastern portion of the

City of Westminster, Orange County, California. The 2.37-acre project site is in the heart of the Little Saigon Community Plan Area, at the southeast corner of Bishop Place and Moran Street.

The site is bounded on the west by Moran Street and commercial uses, on the east by the Bolsa Verde Estates Mobile Home Park, on the south by Bishop Place and single family residential, and to the north

by four vacant dirt lots.

5. Project Sponsor's Name and Address: Moran Property Limited Partnership

8907 Warner Avenue, Suite 108 Huntington Beach, CA 92647

6. General Plan Designation: Planned Development Area D

7. Zoning: C-M (Commercial-Industrial)

8. Description of Project: A detailed description of the project is provided in

Chapter 2.

9. Surrounding Land Uses and Setting: A detailed description of the surrounding land uses

and setting is provided in Chapter 2.

10. Other Public Agencies whose Approval Orange County Fire Authority

is Required:

Environmental Factors Potentially Affected:

The environmental factors checked be would involve at least one impact that on the following pages.			
Aesthetics	Agricultural Reso	ources	Air Quality
Biological Resources	Cultural Resource	es	Geology/Soils
Hazards and Hazardous Materials	Hydrology/Water	Quality	Land Use/Planning
Mineral Resources	Noise		Population/Housing
Public Services	Recreation		Transportation/Traffic
Utilities/Service Systems	Mandatory Findin	ngs of Significance	e
Determination:			
On the basis of this initial evaluation:			
I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.			
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.			
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.			
I find that the proposed project MAY have an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (2) has been addressed by mitigation measures based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.			
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.			
Signature		Date	
Printed Name		For	

Evaluation of Environmental Impacts:

- 1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.
- 4. "Negative Declaration: Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "Potentially Significant Impact" to a "Less-than-Significant Impact". The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level. (Mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced.)
- 5. Earlier analyses may be used if, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D)]. In this case, a brief discussion should identify the following.
 - (a) Earlier Analysis Used. Identify and state where earlier analyses are available for review.
 - (b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - (c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
- 7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9. The explanation of each issue should identify:
 - (a) the significance criteria or threshold, if any, used to evaluate each question; and
 - (b) the mitigation measure identified, if any, to reduce the impact to a less-than-significant level.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
I.	AESTHETICS. Would the project:				
a.	Have a substantial adverse effect on a scenic vista?				
b.	Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings along a scenic highway?				•
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?			•	
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?		•		

- a. **No Impact.** The project would not affect a scenic vista. The topography of the city ranges from gently sloping to flat, and its urban form provides little in the way of visual resources or unique topographic features (City of Westminster 1996). No scenic vistas occur on or near the project site; therefore, no impacts would occur.
- b. **No Impact.** The site currently consists of five vacant parcels. No buildings or structures are on the project site. One mature palm tree is on the site adjacent to Moran Street. Trees in surrounding neighborhoods are not native tree species or historic heritage trees. No natural rock outcroppings, state scenic highways, or scenic resources are located on or near the site. No impacts would occur.
- c. **Less-Than-Significant Impact.** By replacing five vacant lots with a condominium building, the existing character of the site would be substantially changed.

The new condominium building would be approximately 60 feet at the highest extent of the roof and include three stories, with two four-story corner towers. The new building is not consistent with the development standards for condominiums and townhouses, which establish a maximum building height of two stories or 35 feet (City of Westminster Municipal Code Title 17. Land Use, Chapter 17.48.080 Condominiums and Townhouses—Standard Requirements). Building height restrictions are established to maintain compatibility between land uses throughout the city. Along with a new building that would be taller than adjacent buildings, the condominium building would have a greater mass and bulk. The 80 units would be contained within one large building. Because of the larger scale of the proposed building compared with the surrounding buildings, this project would be a major focal point of the neighborhood.

Aesthetic impacts are highly subjective and may or may not be considered adverse by some members of the community. Although the building would be taller and larger than other adjacent buildings, aesthetic impacts would not be considered significantly adverse due to the mixed urban setting, building setback, building and site design, and landscape.

The site is located in an urban environment and is surrounded by mixed land uses with varying heights and masses; these land uses include commercial, residential, and vacant land. The height of

the new building is not expected to cast shadows on adjacent properties. The immediate area does not have a unifying architectural or design theme and is therefore not considered to have a high quality aesthetic value.

Because the project site is located within the Little Saigon Community Plan Area, the condominium building would be required to conform with Little Saigon Community Plan Area design standards. According to these standards, new development will "incorporate architectural elements similar to those found on buildings constructed in Vietnam in the early 1900's in the French Colonial tradition." The basic theme includes elements such as large overhanging tile roofs with eave brackets, use of columns and bright accent colors, and smooth finish stucco exteriors. This architectural style would be compatible with several other buildings within the extended Little Saigon Community Plan Area.

The three- to four-story building would be set back from the property line—40 feet along Bishop Place, 10 feet along Moran Street, and 55 feet adjacent to the mobile home park to the east. Landscape trees would partially screen the east side of the building for mobile home residents. Landscape trees and plantings would enhance the south and west sides of the site.

The project would not degrade the existing visual character or quality of the site; therefore, impacts would be less than significant. The four-story Alternative Development Scenario would result in similar visual impact findings.

d. Less Than Significant with Mitigation Incorporated. The site is currently vacant; however, the current use of the site for overflow parking includes high intensity lights atop approximately 20-foot wooden poles around the perimeter of the property and the four adjacent vacant lots to the north. A total of 13 lights are on the project site. These lights are unshielded and would shine directly into the adjacent mobile home properties. Project lighting would include shielded florescent security lights along the building walls and pole-mounted high-pressure sodium lights along driveways. The parking levels, interior open areas, and units in the building would contribute light to the existing site. The project site is located in an urban environment and is surrounded by existing development with light sources, including street and vehicle lights along Moran Street and Bishop Place; operational, security, and parking lot lighting at nearby commercial properties; and residential and security lighting at the adjacent residential areas. The surrounding buildings and streets contain substantial light sources; therefore, the project would not represent a significant impact on area-wide lighting.

The two major causes of adverse light impacts are glare and spill light. The new building is not expected to have vast expanses of glass that could reflect light and cause glare impacts to nighttime drivers, pedestrians, and adjacent residents. Additionally, the project would include landscape plantings along the exterior of the building, which would reduce potential glare impacts. The new lighting associated with the development is not expected to create an adverse impact on the residents adjacent to the site to the east. The property line for the mobile home residences would be approximately 10 feet from proposed lights for the new residential parking garage ramp and surface parking lights. Variables affecting glare and light spill associated with parking lot lights include mounting heights, locations, and aiming of the light sources. The use of proper design and state-of-the-art reflectors and hoods on light sources would substantially reduce the effects from glare and spill light. Although the new lights would be less intrusive to nearby residences, the following mitigation measures shall be incorporated as part of the project design to ensure that nearby residents are not affected by the project lights.

Mitigation Measures

- MMI-1: The project applicant shall comply with City design and lighting ordinances. Prior to the City design review, the applicant shall submit a detailed lighting plan to the City of Westminster Planning Division. Approved lighting shall be incorporated into the approved building plans and construction drawings.
- MMI-2: Prior to issuance of certificate of occupancy, the lighting contractor and field crew shall ensure the following:
 - all lights shall be aimed away from adjacent streets and residences;
 - the lamp enclosures and poles shall be painted to reduce reflection; and
 - light sources shall be installed with glare shields, hoods, and/or filtering louvers sufficient to prohibit spillage of light onto adjacent residential properties.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
II.	AGRICULTURAL RESOURCES. In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. Would the project:				
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				•
b.	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?				•
c.	Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use?				•

- a. **No Impact.** The California Department of Conservation's Farmland Mapping and Monitoring Program identifies categories of agricultural resources that are significant and therefore require special consideration. According to the Department of Conservation's Important Farmland Map, the project site is located within an area of "Urban and Built-up Land." This is defined as "residential land with a density of at least six units per ten acre parcel, as well as land used for industrial and commercial purposes, golf course, landfills, airports, sewage treatment and water control structures" (California Department of Conservation, Division of Land Resource Protection 1998). Therefore, designated farmland would not be converted to accommodate the project. No impacts would occur.
- b. **No Impact.** The project site is not zoned for agricultural use. The Williamson Act applies to parcels consisting of least 20 acres of Prime Farmland or at least 40 acres of farmland not designated as Prime Farmland. The project site is not located within a Prime Farmland designation, nor does it consist of more than 40 acres of farmland. No impacts would occur.
- c. **No Impact.** The project would not disrupt or damage the operation or productivity of any areas designated as farmland. The project is not located near or adjacent to any areas that are actively farmed; therefore, no farmland could be affected by land use changes in the project site. No impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
III.	AIR QUALITY. When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a.	Conflict with or obstruct implementation of the applicable air quality plan?			•	
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		•		
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?		•		
d.	Expose sensitive receptors to substantial pollutant concentrations?			•	
e.	Create objectionable odors affecting a substantial number of people?				•

- a. **Less-Than-Significant Impact.** A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds growth estimates included in the applicable air quality plan. The project would not result in population or employment growth, as future residents (between 126 and 252 people) are expected to currently live elsewhere in the city. However, if people from outside the city were to move in, the total population increase would not be considered significant. This impact would be less than significant.
- b. Less Than Significant with Mitigation Incorporated. Project-related air emissions would have a significant effect if they resulted in concentrations that create either a violation of an ambient air quality standard or contribute to an existing air quality violation. A Revised Air Quality Study was prepared for the project to assess the potential impacts on the local and regional air quality. The Revised Air Quality Study is attached as Appendix A and is summarized below.

Construction Phase

Construction activities for the project would result in short-term impacts on ambient air quality in the area. Emissions from architectural coatings are estimated at 382.36 pounds per day for reactive organic gases (ROG), which significantly exceeds the South Coast Air Quality Management District's (SCAQMD's) ROG threshold of 75 pounds per day. Additionally, emissions from building construction are estimated at 160.22 pounds per day for nitrogen oxide (NO_X), which exceeds the NO_X threshold of 100 pounds per day. The Alternative Development Scenario would increase the number of units on the fourth story and therefore increase the building surface area and construction

emissions. Implementation of the Mitigation Measures MMIII-1 and MMIII-2 would reduce emissions to levels below SCAQMD thresholds for the project and the Alternative Development Scenario.

Diesel exhaust is another health risk that was analyzed. Exposure to diesel exhaust is expected to be well below the 70-year exposure period. Project construction is not anticipated to result in an elevated cancer risk to exposed persons due to the short-term nature construction-related diesel exposure. In addition, particulate matter smaller than or equal to 10 microns in diameter (PM₁₀) from diesel emissions would be below the SCAQMD's daily threshold. The diesel risks associated with construction activities are considered to be less than significant.

Mitigation Measures

- MMIII-1 Architectural coating activities, such as painting and stucco application, shall be limited to coating a maximum of 4,000 square feet of surface per day.
- MMIII-2 The project applicant shall implement the following NO_X-reducing practices during all construction activities:
 - use aqueous diesel fuel in all off-road diesel equipment and
 - use cool exhaust gas recirculation equipment.

Operational Phase

Long-term air quality impacts are those associated with the change in permanent use of the proposed project site and from the addition of vehicle trips, stationary equipment, and landscape maintenance equipment. Maximum operational stationary and mobile source air emissions are generated from vehicular emissions. Operation of the project would result in ROG, NO_X, carbon monoxide (CO), and PM₁₀ emission levels below SCAQMD thresholds. Therefore, no impact is anticipated to result from project operations or the Alternative Development Scenario.

- c. Less Than Significant with Mitigation Incorporated. The SCAQMD considers its cumulative emissions thresholds to be the same as its project-specific thresholds. Therefore, if a project's mitigated emissions exceed the SCAQMD's project-specific thresholds for either construction or operation, the project would have both project-specific and cumulatively significant air impacts.
 - Because the proposed project and the Alternative Development Scenario would not exceed construction emission thresholds (after implementation of mitigation measures), or operational project-specific emissions thresholds, it would not result in air quality impacts that are cumulatively considerable. Implementation of Mitigation Measure III-1 would ensure compliance with SCAQMD cumulative emissions standards.
- d. **Less-Than-Significant Impact.** Certain residents, such as the very young, the elderly, and those suffering from certain illnesses or disabilities, are particularly sensitive to air pollution and are considered "sensitive receptors." The major source of project-related pollution affecting sensitive receptors would be CO generated by increases in automobile traffic. CO concentrations in the vicinity of congested intersections (LOS F) and freeways would be expected to be higher than those recorded at the monitoring station. Traffic data indicates that the increases in traffic would be less than significant; therefore, CO concentrations are anticipated to be below the thresholds and would not result in a significant air quality impact. Air quality impacts on sensitive receptors would be less than significant.

e. No Impact. The residential project is not expected to generate any objectionable odors affecting a			
	No Impact. The residential project is not expected to generate any objectionable odors affecting a substantial number of people. No impacts would occur.		

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
IV.	BIOLOGICAL RESOURCES. Would the project:				
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				•
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?				•
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				•
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				•
f.	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?				•

- a. **No Impact.** Sensitive biological species are not known to occur in the City because of its highly urbanized environment (City of Westminster 1996). The project site is located in a fully urbanized setting and is void of any natural vegetation or wildlife habitat; therefore, it does not have the potential to accommodate sensitive biological resources. No impacts would occur.
- b. **No Impact.** The site is void of any riparian habitat or other natural communities and therefore does not have the potential to accommodate sensitive biological resources. No impacts would occur.

- c. **No Impact.** The project would not result in impacts to wetland areas. The City does not have any significant wetland areas because of the extent of the urban development. The site consists of five vacant dirt parcels and does not contain any wetland resources. Additionally, soil on the site does not meet the requirements for hydric soil for support of wetland species. No impacts would occur.
- d. **No Impact.** The project would not impact migratory corridors, as it does not contain native vegetation and does not support foraging, roosting, or nesting sites. The only area identified as containing migratory habitat in the City is the 160-acre Westminster Memorial Park Cemetery, which affords some habitat for migratory ducks, geese, and wild birds, such as hawks and owls (City of Westminster 1996). The project site is located approximately 1.5 miles east of the cemetery and would not have an effect on this area. No impacts would occur.
- e. **No Impact.** The project would not conflict with any local policies or ordinances protecting biological resources. The project site does not contain any biological resources that are protected by local policies. No impacts would occur.
- f. **No Impact.** The site does not contain any sensitive biological resources. The project would not conflict with provisions of an adopted conservation plan or other local, regional, or state conservation plans. No impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
V.	CULTURAL RESOURCES. Would the project:				
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				•
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		•		
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				•
d.	Disturb any human remains, including those interred outside of formal cemeteries?		•		

For the purposes of CEQA, historical resources usually include prehistoric and historical archaeological sites and the built environment. Efforts to identify cultural resources in the project area included a record search, a literature review, an archaeological survey, a pedestrian survey, and consultation with the Native American Heritage Commission (NAHC), Native American representatives, and a local historical society. A detailed Cultural Resources Study was prepared by Jones & Stokes and is included in its entirety as Appendix B. The study is summarized below.

- a. **No Impact.** The project area is a vacant parcel. The adjacent parcels do not contain properties that meet the age criterion of 50 years or older to be considered as potentially historic resources for the purposes of CEQA.
- b. Less Than Significant with Mitigation Incorporated. No prehistoric or historical archaeological sites were identified within the project area, and the project area appears to have low sensitivity for archaeological resources. However, Anthony Morales, chairman of the Gabrieliño/Tongva contacted Jones & Stokes with concerns that the project area is sensitive for Native American cultural resources. Mr. Morales requested that a Native American monitor be present during all groundbreaking activities.

There is always the possibility that significant buried cultural resources that were not identified during research or field surveys could be unearthed during project activities. Construction activities could result in the demolition or disturbance of significant cultural resources, which would be considered a significant impact. Implementation of Mitigation Measure MMV-1 would reduce this impact to a less-than-significant level.

Mitigation Measure

MMV-1: During construction, if buried cultural resources, such as chipped or ground stone, historical artifacts, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, the contractor shall ensure that all work will stop

in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the City.

If human remains of Native American origin are discovered during project construction, compliance with state laws, which fall within the jurisdiction of the NAHC (Public Resource Code Sec. 5097), relating to the disposition of Native American burials will be adhered to. If any human remains are discovered or recognized in any location other than a dedicated cemetery, the contractor shall ensure that excavation or disturbance of the site (including any nearby area reasonably suspected to overlie adjacent human remains) shall stop until:

- 1. the coroner of the county has been informed and has determined that no investigation of the cause of death is required; and
- 2. if the remains are of Native American origin,
 - a. the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
 - b. the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California NAHC.

- c. No Impact. The project would not disturb any known paleontological resources or unique geologic features. Paleontological resources are plant and animal fossils dated from 3.5 million to 7,000 years ago. During previous surveys, no paleontological resource sites were found within 2 miles of the City boundaries (City of Westminster 1996). Unknown paleontological resources have some potential to occur in subsurface areas of the site. However, due to the limited extent of construction, these are not anticipated to be disturbed if they in fact exist. Additionally, the site is flat and located in an urban area. No other unique geologic features are expected to be disturbed by the project. No impacts would occur.
- d. Less Than Significant with Mitigation Incorporated. The 160-acre Westminster Memorial Park Cemetery is located approximately 1.5 mile southwest of the project site. However, no human remains, including those in formal cemeteries, were identified on the project site. There is always the possibility that unmarked burials may be unearthed during construction. This would be considered a significant impact. If human remains are identified during construction, implementation of Mitigation Measure MMV-1 would reduce this impact to a less-than-significant level.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
VI.	GEOLOGY AND SOILS. Would the project:				
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)				
	2. Strong seismic ground shaking?			•	
	3. Seismic-related ground failure, including liquefaction?		•		
	4. Landslides?				•
b.	Result in substantial soil erosion or the loss of topsoil?		•		
c.	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?		•		
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			•	
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?				•

a1. **No Impact.** The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. Surface rupture is the most easily avoided seismic hazard. The primary purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the construction of buildings used for human occupancy on an active fault line. Unlike damage from ground shaking, which can occur at great distances from the fault, impacts from fault rupture are limited to the immediate area of the fault zone where the fault breaks along the surface.

There are no known active fault systems located within the city limits; therefore, no part of the City of Westminster has been designated under the Alquist-Priolo Act as a Special Study Zone (City of

Westminster 1996). Additionally, the City of Westminster is not listed on the California Department of Conservation, Division of Mines and Geology's list of cities affected by Alquist-Priolo Earthquake Fault Zones (California Department of Conservation, Division of Mines and Geology 1999). No fault rupture impacts would occur.

a2. Less-Than-Significant Impact. The project could expose people and structures to potential impacts associated with seismic ground shaking. The expected ground motion characteristics of future earthquakes in the region will depend on the characteristics of the generating fault, the distance to the epicenter, the magnitude of the earthquake, and the site-specific geologic conditions. According to the City's general plan (City of Westminster 1996), ground shaking of moderate to severe intensity may be expected in the city from any of the seven major fault zones: San Andreas, Newport-Inglewood, Sierra Madre, Cucamonga, Whittier-Elsinore, San Jacinto, or San Fernando. The most likely source of a strong seismic movement within the region would be a major earthquake on the San Andreas Fault located approximately 46 miles to the northeast. Other potentially active local fault systems that could also affect the city and the project site are the Newport-Inglewood Fault Zone approximately 5 miles away, the Compton Thrust Fault approximately 5 miles away, Elysian Park Thrust Fault approximately 10 miles away, the Palos Verdes Fault approximately 14 miles away, and the Whittier-Elsinore Fault Zone approximately 15 miles away.

Westminster is underlain by poorly consolidated alluvial deposits and is located in Zone C, a region of greatest shaking in the Orange County area (City of Westminster 1996). Required compliance with the most recent Uniform Building Code (with State of California modifications), including incorporation of state seismic safety standards, would minimize the potential for significant impacts. Project plans would be reviewed during the plan check process, which would ensure that these measures are incorporated. Seismic ground shaking impacts would be less than significant.

a3. Less Than Significant with Mitigation Incorporated. The project could expose people and structures to liquefaction and secondary seismic-related ground failure such as differential settlement. Liquefaction is the temporary transformation of a soil or sediment to a fluid mass and is initiated by ground shaking, such as from earthquakes. Soils and sediments most susceptible to liquefaction are low cohesion silty or sandy materials that are saturated by groundwater within 50 feet of the surface. However, other sediments, such as some gravelly and some cohesive materials, may also be subject to liquefaction (California Division of Mines and Geology 1997). Additionally, ground shaking of sufficient magnitude must be present for liquefaction to occur. Soils/sediments that are liquefied result in a loss of support for structures, utilities, and paving.

The project site is located in a designated liquefaction zone (California Department of Conservation, Division of Mines and Geology 1999). Additionally, the City's general plan designates the project site a having High Liquefaction Potential (City of Westminster 1996). Additionally, the site is underlain by shallow groundwater, between 8 and 14 feet below ground level (Environmental Data Resources, Inc. 2004). The subterranean parking garage would require excavation of soils to a maximum depth of approximately 12 feet. This is considered a potentially significant impact.

All structures on the site would be constructed in accordance with the Uniform Building Code (with State of California modifications) and state seismic safety standards. The City's general plan states that compliance with Public Safety Policies VA1-2, VA1-3, and VA1-4 would reduce potential impacts to less-than-significant levels. The general plan policies are therefore incorporated as mitigation measures to ensure compliance prior to and during construction. Additionally, because of the potentially significant impact due to the high liquefaction potential and shallow groundwater level, detailed mitigation has been identified that would reduce impacts to a less-than-significant level.

- MMVI-1: During plan check, the applicant shall submit a geologic report to the City of Westminster Building Department to identify site conditions and potential seismic geologic hazards risk and recommend measures to reduce potential safety impacts. The project design and development shall incorporate all recommended measures outlined in the geologic report to ensure that safety is not compromised (General Plan Policies VA1-2 and VA1-3).
- MMVI-2: All grading and construction plans shall clearly indicate required mitigation measures (General Plan Policy VA1-4).
- MMVI-3 The geologic report submitted in support of the grading permit and building permit applications shall include a liquefaction study. Three copies of the report shall be submitted. Additional measures may be required for structural design and waterproofing of foundations and below grade construction. The geologic report shall be prepared by a California registered geotechnical engineer and shall provide criteria for design of foundations and underground walls and slabs, including waterproofing. The report shall be prepared according to *Guidelines for Evaluation and Mitigating Seismic Hazards in California, Chapter 6 Analysis and Mitigation of Liquefaction Hazards* (California Division of Mines and Geology 1997) and shall include results from a detailed field investigation, a geotechnical field investigation, and geotechnical laboratory testing.

This mitigation measure assumes that the geologic/soils report will conclude that the liquefaction hazard at the site can be mitigated to an acceptable factor of safety for liquefaction resistance through the implementation of methods to prevent structural damage from liquefaction. Such methods may include one or more of the following:

- excavation and removal or recompaction of potentially liquefiable materials;
- in-situ (i.e., in place) ground densification (e.g., compaction with vibratory probes, compaction grouting);
- other types of ground improvement (e.g., permeation grouting, deep drains, structural fills, dewatering);
- deep foundations (e.g., piles, piers);
- reinforced shallow foundations (e.g., grade beams, rigid raft foundations); and
- design of structures to withstand predicted ground softening and vertical and lateral ground displacement.
- a4. **No Impact.** The project would not expose people or structures to landslide hazards. The topography of the site and surrounding area is generally flat and is not susceptible to landslides. No impacts would occur.
- b. **Less Than Significant with Mitigation Incorporated.** Because of the low topographic relief on site and the project surface coverage (asphalt, buildings, and landscaping), significant soil erosion after construction is not expected. Exposed onsite soils would, however, be particularly prone to soil erosion impacts during the construction phase of the project, especially during heavy rains. Construction activities that could increase erosion potential would involve grading, excavation, and

hauling materials on and off the site. Soil erosion impacts would be reduced to a less-than-significant level through compliance with the City's erosion control plan policies, which specify best management practices (BMPs) for temporary erosion controls. Such measures typically include temporary catchment basins and/or sandbagging to control runoff and contain sediment transport in the project site. The City's erosion control policies that relate to the project are incorporated in the following mitigation measure.

Mitigation Measure

MMVI-4:

Prior to obtaining a grading permit, the applicant shall prepare and submit an erosion control plan to the City of Westminster Engineering Department to reduce erosion of on- and offsite soils. This shall include, but not be limited to, the following measures.

- The contractor shall water the site at least twice daily to reduce potential wind erosion and fugitive dust impacts.
- The contractor shall be responsible for implementing wheel washing for the construction vehicles and equipment leaving the site to reduce deposition soil into the public right-of-way.
- During construction, the contractor shall implement street sweeping in the vicinity of the project at least once per week, or as deemed necessary by the City's Building and Engineering Departments.
- During construction, the contractor shall implement the BMPs, as identified in the erosion control plan and Storm Water Pollution Prevention Plan (SWPPP).
- c. Less Than Significant with Mitigation Incorporated. The site is located within an established liquefaction zone (California Department of Conservation, Division of Mines and Geology 1998). Additionally, project site contains unknown soils that may have been previously imported from another unidentified location or may be natural materials. Soils in this area of the city are generally identified as Cenozoic Era, Quaternary Series soils. This type of soil consists of the following soil surface textures: various types of sand, coarse, fine, loamy, gravelly, and loam (sandy, clay, silt) and clay. Deeper soil types include as stratified series of loam, sand, and weathered bedrock (Environmental Data Resources, Inc. 2004).

Because the project site is located in a liquefaction zone, and the exact composition of the onsite soils is unknown, it is assumed that the project site may be susceptible to unstable soils conditions that result in ground deformation, including shrinkage, settlement, lateral spreading, or any other horizontal deformation. The incorporation of Mitigation Measures MMVI-1, MMVI-2, and MMVI-3 would reduce potential unstable soils impacts to less-than-significant levels.

d. Less-Than-Significant Impact. Expansiveness is the potential of the soil to swell and shrink with repeated cycles of wetting and drying. Expansive soils are not suitable for building foundations as they tend to be compressible and do not provide adequate support. Approximately 25% of Westminster is underlain by soils with expansive or non-cohesive properties. These soils occur in the northwestern corner and southeastern portion of the city (City of Westminster 1996). Although exact composition of the onsite soils is unknown, the project site is located outside areas identified as having expansive soils. It is expected that no special project design treatment expansive soils would be required; therefore impacts would be less than significant.

e.	e. No Impact. No septic systems would be required because the project would be connected to the existing municipal sewer system. No impacts would occur.					

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
VII.	HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			•	
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			•	
c.	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			•	
d.	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			•	
e.	Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?				•
f.	Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?				•
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			•	
h.	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				•

a. **Less-Than-Significant Impact.** Construction activities would involve the transport of fuels, lubricating fluids, solvents, and other substances. However, the duration of the construction activities would be short and would not require the handling of significant amounts of these substances. Large quantities of materials considered hazardous by the Environmental Protection Agency (EPA) would not be used at the development.

The storage, handling, and disposal of hazardous materials are regulated by the EPA, Occupational Safety & Health Administration (OSHA), Orange County Fire Authority (OCFA), and the Orange County Health Department. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would minimize the potential for safety impacts to occur and would ensure that all potentially hazardous materials are used and handled in an appropriate manner. Implementation of these measures would result in less-than-significant impacts, and no additional mitigation is required. Typically, residential land uses do not generate, store, dispose of, or transport significant quantities of hazardous substances. In addition, such land uses normally do not involve any dangerous activities that could expose onsite people or the surrounding community to any health hazards. Impacts would be less than significant.

- b. Less-Than-Significant Impact. The project is not expected to result in upset or accidents involving the release of hazardous materials. Acutely hazardous materials, which are defined as having the potential to cause severe biological harm or death soon after a single exposure or dose, would not be used, stored, or disposed of on or off site. The construction and operation of the project, however, would involve the handling of potentially hazardous materials such as cleaning products, solvents, fuels, and lubricating fluids. Accidental release of these substances during transport or storage may have the potential to affect the public. However, adherence to safety regulations set forth by the EPA, OSHA, OCFA, and the Orange County Health Department would result in less-than-significant impacts; therefore, no additional mitigation is required.
- c. **Less-Than-Significant Impact.** The project site is approximately 0.25 mile west of an elementary school located at Bouchard Street and Bishop Place. However, the residential project would not emit hazardous pollutants; therefore, impacts would be less than significant.
- d. **Less-Than-Significant Impact.** The project site consists of a vacant unpaved lot that may have been used for row crops but was never developed. The lot was recently used as an overflow parking area for the commercial shops on the west side of Moran Street and the Asian Garden shops one block east.

A search of available environmental records was conducted by Environmental Data Resources, Inc. (2004). The database search was conducted for the project site and areas within 1 mile of the project site. As part of the government records search several databases were accessed including Resource Conservation and Recovery Act (RCRIS); Facility Index Systems/Facility Identification Initiative Program Summary Report (FINDS); Hazardous Waste Information System (HAZNET); and Hazardous Substances Storage Container Database (UST HIST). These sources recognize locations that generally store, transfer, or use hazardous and potentially hazardous materials. The Environmental Data Resources, Inc. report meets the government records search requirements of the American Society of Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments. The review of governmental regulatory agency databases revealed no areas of environmental concern on the project site; therefore, no impacts would occur. Thirty-five facilities were identified within a 0.25-mile radius of the project site.

Table 3-1 lists the closest locations of sites containing hazardous or potentially hazardous materials, the databases in which they are listed, and information regarding the hazardous materials on those sites.

Table 3-1. Identified Sites Containing Hazardous or Potentially Hazardous Materials

Name	Address	Distance from Project	Listed Database(s)	Violations/ Information
PLT	15185 Moran Street	0-1/8 mile	HAZNET	Generates unspecified solvent mixture. Recycled off site. No violations listed.
Pacific Coast Painting	15181 Moran Street	0-1/8 mile	RCRIC-SQG; FINDS	Small-quantity generator. No violations found.
Bolsa Auto Repair & Muffler	15175 Moran Street	0-1/8 mile	HAZNET	Generates waste oil and mixed oil. Recycled off site. No violations listed.
Weld Right	15201 Moran Street	0-1/8 mile	RCRIC-SQG; FINDS	Small quantity generator. No violations found.
Jacobsons Mobile Auto Tune	15167 Moran Street	0-1/8 mile	RCRIC-SQG; FINDS	Small quantity generator. No violations found.
Da Tai Auto Repair	15165 Moran Street	0-1/8 mile	HAZNET	Generates aqueous solution 10% organic residues. Recycled off site. No violation listed.
1X Westminster Industrial Venture	150205 Moran Street	0-1/8 mile	HAZNET	Generates waste oil and mixed oil. Recycled off site. No violations listed.
ABC Auto Repair	15159 Moran Street	0-1/8 mile	HAZNET	Generates waste oil and mixed oil. Recycled off site. No violations listed.
California Metal Systems Inc.	15131 Moran Street	0-1/8 mile	HAZNET; UST	Generates waste oil/water, separation sludge, and mixed oil. Recycled off site. No violations listed.
Cal Metal Systems, A Cal Corp.	15131 Moran Street	0-1/8 mile	FINDS; EMI	No violations listed.
A&D Auto Body	15109 Moran Street	0-1/8 mile	HAZNET; LOCAL	Generates solvent mixture waste and othe organic solids. Recycled off site. No violations listed.
Mueller Pipeliners Inc.	15082 Moran Street	0-1/8 mile	HAZNET	Generates waste oil and mixed oil. Recycled off site. No violations listed.
Atlantic Auto Parts & Repair	15081 Moran Street	0-1/8 mile	HAZNET	Generates solvent mixture waste and othe organic solids. Recycled off site. No violations listed.
Orange County Fire Station # 66	15061 Moran Street	0-1/8mile	UST; HIST UST; LUST Cortese; CA FID UST	Minor leaking from diesel underground storage tanks. No action required. Case closed. Warning/notice of violation to uncooperative responsible parties. Case closed.
N Q Design	15058 Moran Street	0-1/8 mile	CLEANERS	No violations listed.
Alex Datsun SVC	15058 Moran Street	0-1/8mile	RCRIS-SQG; FINDS	Small-quantity generator. No violations found.
Allstar Manufacturing	15171 West State Street	0-1/8mile	RCRIS-SQG; FINDS; HAZNET	Small-quantity generator. No violations found.

Source: Environmental Data Resources, Inc. 2004.

The types of facilities listed are typically found in urban areas and are not considered a danger to the health of persons who would reside at the proposed senior development. Additionally, no businesses operating within 0.25 mile of the project had a significant release or mishandling of any hazardous substances. Therefore, impacts are considered less than significant.

- e. **No Impact.** The project site is not located within an airport land use plan, or within 2 miles of a public airport. No impacts would occur.
- f. **No Impact.** The project is not located within the vicinity of a private airstrip. No impacts would occur.
- g. Less-Than-Significant Impact. The project would not interfere with an adopted emergency response or evacuation plan. The City maintains an emergency operations plan, which outlines the City's planned response to emergency situations involving natural disasters, technological incidents, and nuclear defense operations (City of Westminster 1996). The plan identifies the emergency management organization as being responsible for emergency support and protection. OCFA provides emergency medical and fire protection support, and the Westminster Police Department is responsible for coordinating law enforcement and traffic control operations in emergency situations. The project would not affect the existing emergency service operations. Emergency vehicle access for the project would be provided by three access points: two on Moran Street and one on Bishop Place. Additionally, three pedestrian gates would be provided. Emergency fire, police, and medical vehicles would have free access through these gates. Impacts would be less than significant.
- h. **No Impact.** The project site is located within an urban area and is surrounded by developed areas. No native vegetation or wildlands are located adjacent to or near the project site. No wildland fire impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
VIII.	HYDROLOGY AND WATER QUALITY. Would the project:				
a.	Violate any water quality standards or waste discharge requirements?		•		
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?				
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?		•		
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?			•	
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		•		
f.	Otherwise substantially degrade water quality?			•	
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				•
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?				•
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?			•	

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
j.	Contribute to inundation by seiche, tsunami, or mudflow?				•

a. Less Than Significant with Mitigation Incorporated. During construction, sediment from erosion is the pollutant most frequently encountered. Other pollutants of concern include toxic chemicals and miscellaneous wastes. A typical construction site uses many chemicals or compounds, such as gasoline, oils, grease, solvents, and lubricants, that can be hazardous to aquatic life should they enter a waterway. Additionally, concrete, trash, and sanitary wastes are common sources of potentially harmful materials. Although most of the parking area would be contained within an enclosed parking garage, oils, grease, trash, etc. may accumulate in the driveways and surface areas during operation of the project. These substances can be washed into storm drains during heavy rains.

The City's grading ordinance regulates grading activities to prevent degradation of water quality. This ordinance requires that contractors implement BMPs to prevent erosion and sedimentation. Two types of BMPs are recommended for small construction projects: non-structural BMPs and structural BMPs. Non-structural BMPs include minimizing disturbance, preserving natural vegetation, and good housekeeping. Structural BMPs include two categories: erosion controls and sediment controls. Erosion controls include use of such materials as mulch, grass, and stockpile covers. Sediment controls include use of silt fencing, inlet protection, check dams, stabilized construction entrances, and sediment traps. Most erosion and sediment controls also require regular maintenance during the construction period to operate correctly.

Mitigation Measures MMVIII-1 and MMVIII-2 shown below, in conjunction with Mitigation Measure MMVI-4, would ensure that stormwater and grading impacts on water quality are reduced to a less-than-significant level.

Additionally, impacts to surface water quality may occur during dewatering activities. Because the subterranean parking garage would be constructed and would operate underground in an area subject to shallow groundwater levels, it may be subject to inundation by groundwater. The underground portion of the project would most likely be sealed to be impermeable to possible surrounding groundwater. A small amount of ongoing dewatering may be required to address possible leakage and minor surface water inundation. This would be handled by sump pumps discharging into storm drains or sanitary sewers. If the construction or operation of the parking garage requires dewatering activities, this action may result in a discharge to surface waters, a violation of surface water quality standards, or a substantial degradation of water quality. Therefore, impacts to water quality would be significant. Mitigation Measure MMVIII-3 would reduce this impact to a less-than-significant level.

Mitigation Measures

MMVIII-1: Prior to issuance of any grading permits, the applicant shall prepare an SWPPP and provide proof that a Notice of Intent (NOI) to file a National Pollution Discharge Elimination System Permit (NPDES) was filed with the Santa Ana Regional Water Quality Control Board (Santa Ana RWQCB). This evidence shall consist of a copy of the NOI stamped by the Santa Ana RWQCB.

- MMVIII-2: Prior to the issuance of any grading permit, a Water Quality Management Plan (WQMP) for the final detailed project designs shall be submitted by the applicant to be approved by the City engineer. The WQMP shall identify a program for the implementation of specific structural and non-structural BMPs to address water quality issues associated with the final detailed project design construction and development and so that predictable runoff is controlled.
- MMVIII-3: Controls on operational dewatering shall be implemented during excavation and construction phases. Wastewater generated as a part of dewatering shall be discharged to the sanitary sewer for treatment at a wastewater treatment plant if possible. If discharge to surface waters is unavoidable, before engaging in dewatering activities, the applicant will obtain an individual NPDES permit from the Santa Ana RWQCB for these discharges. This permit will contain provisions that will require that discharges do not significantly degrade surface water quality, and will require a monitoring program to ensure that permit conditions are met. Water discharged into surface water facilities will be required to meet the total maximum daily load (TMDL) and NPDES limits set in Orange County's water quality permit.
- b. Less-Than-Significant Impact. The project would not substantially deplete groundwater supplies. The City gets approximately 66% of its water supply from groundwater supplied by the Orange County Water District and 34% from Metropolitan Water District of Southern California (MWD) sources (City of Westminster 2003). However, this water is not pumped from the groundwater below the project site. Implementation of the project would not create a substantial demand on groundwater sources and would not significantly change the amount of groundwater available and pumped from local wells. The site consists of 2.2 acres of vacant land that was used for overflow parking and is void of mature vegetation; therefore, the site does not have the capacity to serve as a significant source for groundwater recharge. The project does not involve the direct withdrawal of groundwater for municipal use and would not substantially interfere with recharge capabilities. Impacts to groundwater wells would be less than significant.

Because the subterranean parking garage would be constructed and would operate underground in an area subject to shallow groundwater levels, it may be subject to inundation by groundwater. During construction, an unknown amount of dewatering may be required to set the footings, foundation, and walls. Additionally, a small amount of ongoing dewatering may be required to address possible leakage and minor surface water inundation during operation. Dewatering would not deplete overall groundwater supplies.

Additionally, the possible intrusion of the parking garage into the groundwater level would not obstruct or restrict the water flow. The size of this garage compared to the large size of the groundwater layer is considered negligible. Impacts to groundwater level, flow, and recharge are therefore considered to be less than significant.

c. **Less Than Significant with Mitigation Incorporated.** The project would not alter the existing drainage pattern of the site or cause substantial erosion or siltation.

For the most part, the existing site is impermeable to stormwater due to continued use as an overflow parking area and compaction of soils. Stormwater runoff currently runs into the surrounding streets and existing storm drains. Site drainage after development would continue to be channeled into storm drains in the surrounding streets. Because the site is vacant, erosion or siltation may currently add sediment to the stormwater runoff entering the surrounding storm drains. As part of the project

development, erosion and sediment controls would be implemented. Sediments would be greatly reduced from the runoff, thereby improving the water quality.

Construction activities could increase erosion potential during the grading, excavation, and hauling of materials on and off the site. This would result in onsite soils being prone to soil erosion impacts, especially during heavy rains. The project is required to comply with the conditions of the BMPs (see item b under Section VI, Geology and Soils). The project applicant will submit a WQMP and an Erosion Control Plan identifying all appropriate routine and minimum structural and non-structural BMPs, as stipulated in Mitigation Measure MMVI-3. Compliance with this mitigation measure would reduce potential erosion impacts to less-than-significant levels.

- d. Less-Than-Significant Impact. The project would result in approximately the same amount of impermeable surfaces as on the project site; therefore, there would be little change in the absorption rates and the amount of surface runoff. Because of the urban character of the area and the previous use of the project site as a overflow parking lot, substantial amounts of stormwater are not readily absorbed into the soil. The site currently directs surface flow to storm drains in the surrounding streets. Development of the site would not significantly alter the existing volumes of runoff and would continue to direct runoff to the same storm drains that are currently used. The project would not increase flooding potential. Additionally, the project is required to have no net increase in stormwater discharge into existing storm drains. The WQMP will address this requirement; therefore, impacts would be less than significant.
- e. **Less Than Significant with Mitigation Incorporated.** The project would generate approximately the same amount of stormwater flowing off the site during wet weather conditions as the site does currently; therefore, existing drainage facilities within the area are expected to have adequate capacity to accommodate stormwater flows from the site development without contributing to flooding.

Some polluted runoff would be generated from driveways and other onsite locations with impermeable surfaces, and from possible dewatering activities. However, as part of the project, new runoff control structures would be constructed and would conform to BMPs. Therefore, relative to existing conditions, the implementation of the project would result in improved overall water quality for stormwater runoff. Given the relatively small size of the project site and the highly urbanized character of the surrounding areas and site, no significant impacts on overall water quality are anticipated during operation. Compliance with conditions of the BMPs and the WQMP (Mitigation Measures MMVI-4, MMVIII-1, MMVIII-2, and MMVIII-3) would improve the water quality entering the storm drains, as compared to existing conditions. Impacts would be less than significant with mitigation incorporated.

- f. **Less-Than-Significant Impact.** The project would not otherwise degrade water quality, as no other sources that contribute to water degradation would occur.
- g. **No Impact.** The project would not expose people to significant flooding hazards. Westminster is located within the alluvial plains of the San Gabriel and Santa Ana Rivers, which are both outside city limits. The project site is located in Flood Zone X, which is outside a 100-year flood hazard area (Panel #06059C0028F, Dated 6-14-2000) (Almendralo pers. comm.). No impacts would occur.
- h. **No Impact.** The project site is located outside the 100-year flood zone. No impacts would occur.
- i. **Less-Than-Significant Impact.** Westminster is located entirely within the dam inundation zone of Prado Dam, approximately 20 miles northeast. The entire city is within the 500-year flood zone; however, floods depths would be less than 1 foot in the event of dam failure (City of Westminster

1996). Prado Dam is a flood control and water conservation project constructed and operated by the U.S. Army Corps of Engineers, Los Angeles District. The Los Angeles District has begun construction to increase the capacity of the reservoir behind Prado Dam. The modifications to the dam will take place in three phases:

- 1. raising the height of the dam 30 feet, building a new intake tower, and constructing improvements to the dam's outlet works (Mar 2003–Sep 2003);
- 2. constructing dikes in the basin to protect property (Sep 2004–Sep 2007); and
- 3. raising the height of the adjacent spillway 20 feet (Jul 2006–Jan 2008) (U.S. Army Corps of Engineers, Los Angeles District 2004).

However, in the event of a dam failure, based on the distance to Prado Dam, the projected depth of potential floodwaters (less than 1 foot), and the emergency warnings that would be issued in the event of dam failure, the project would not expose people or structures to a significant risk. Impacts would be less than significant.

j. **No Impact.** The project does not have the capability to expose people to potential impacts involving seiches, tsunamis, or mudflows. The project site is located inland within an area of relatively flat terrain. The project site is not near any major water bodies or in the path of mudflows. No impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
IX.	LAND USE AND PLANNING. Would the project:				
a.	Physically divide an established community?			•	
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			•	
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?				•

a. **Less-Than-Significant Impact.** The project would not physically divide an established community. The project site is bordered by a mix of land uses, including mobile homes and single family residences to the east and south; commercial uses across Moran Street to the west; and vacant land adjacent to the north. Although the new building would be a focal point for the area and would be larger and taller than neighboring residential and commercial developments, the three to four-story building would be set back from the property line and partially screened by landscape trees and plantings for nearby residents.

The project would support the existing residential land use pattern to the east and south. Additionally, the senior condominiums would provide a non-commercial buffer between the mobile home park and the auto service shops. Therefore, the project would be compatible with surrounding land uses and would not divide the existing community. Impacts would be less than significant.

b. **Less-Than-Significant Impact.** The City regulates land use within its jurisdiction through a general plan and zoning ordinance. Compliance with each of these is discussed below.

General Plan

The project site has a general plan designation of "Planned Development Area D" (City of Westminster 1996). The Planned Development land use designation provides for mixed- or single-use development and each designated site has a goal that guides development as well as use type. The goal for Area D states a desire for commercial retail uses (hotel complex and visitor center) or residential component. The residential senior condominium project is consistent with this goal. Floor area ratios and density limits would be exceeded (see zoning below); however, this is permitted in a Planned Development Area as long as compliance with performance standard goal provisions is demonstrated (General Plan Policy IIA2-9). The Planned Development Area D performance standard goal is 300 average daily vehicle trips (ADT) per acre. The proposed project is expected to generate 1,543 ADT for the 2.37-acre site, or approximately 650 ADT per acre. However, General Plan Policy IIA2-9 states the performance standard goals may be exceeded if the traffic analysis finds that the increase will not adversely impact the City's transportation system, ADT potential on other Planned Development Area sites, or the City's ability to meet regional transportation mandates. A traffic impact study was prepared by Linscott, Law and Greenspan Engineers (LLG) in February 2004 and

revised in June 2004 (Appendix D). As shown in this report, the project would not exceed City of Westminster traffic impact criteria. Additionally, the project would not affect existing regional transportation systems. Therefore, the project would be consistent with the performance standard.

The project site is also in the Little Saigon Community Plan Area and is therefore required to be designed and built to comply with Little Saigon Community Plan Area design standards. According to these standards, new development will "incorporate architectural elements similar to those found on buildings constructed in Vietnam in the early 1900's in the French Colonial tradition." A traditional Chinese architectural theme may also be used. The basic theme includes elements such as large overhanging tile roofs with eave brackets, use of columns and bright accent colors, and smooth finish stucco exteriors. Additionally, prior to approval, the project will be reviewed by City staff for conformance with design guidelines. The project would be consistent with the Little Saigon Community Plan Area policies.

In addition, the project is located in a redevelopment area, which is identified as an integral part of future development in Westminster. The goal of redevelopment areas is to increase City revenues, improve the citywide image, and provide needed infrastructure. The project would contribute to City revenues through property taxes. The project would improve the citywide image by converting a vacant lot into a theme-oriented livable community and would introduce new development to help revitalize the area. Therefore, the project is consistent with the redevelopment area goal.

Zoning Ordinance

The Land Use Ordinance (zoning) of the City of Westminster Municipal Code (Code) designates the project site as C-M (Commercial Industrial). Permitted uses within the C-M zone are required to comply with the City Industrial Performance Standards (Section 17.26.010). Because the project is residential and not commercial or industrial, it would not comply with the existing City Industrial Performance Standards; therefore, it would not be consistent with the zoning designation. A zone change from C-M to R-5 (Multiple Units, 19 to 24 Units/Acre) is required and is part of the project application. Permitted uses for a R-5 zone range from apartment houses and boarding lodges to multiple-, two-, and single-family units. Senior citizen dwellings are subject to the provisions of a conditional use permit.

Based on the 103,500-square-foot size of the project site (103,613 minus the 113-square-foot City-required dedication of land), the project would provide 1,294 square feet of land area per unit. However, an R-5 residential zone requires a minimum of 1,800 square feet of land per unit, or a maximum of 57 allowable units for the project site. To construct a higher density development on the project site, the developer has proposed that the project exclusively house residents 55 years or older, therefore providing for a density bonus of 25% above the allowable units. This agreement would allow 14 additional units to be developed, for a total of 71 units. The increase in density beyond 71 units would be permitted by the City because the project is consistent with the City's land use designation of Planned Development. This incentive would allow the remaining nine units to be developed, for a total of 80 units

Additionally, the City Code limits the height for condominiums to two stories or 35 feet (City of Westminster Municipal Code Title 17. Land Use). The condominium building would be three stories with two four-story towers and approximately 60 feet high, which would exceed the height limit for this building. An application for a height variance is part of the project and if approved would allow the project to exceed the two-story, 35-foot height limit.

A parking study was conducted to identify potential parking impacts. The project would provide two parking spaces per unit. This is consistent with City parking requirements. See Item XV, Transportation and Traffic, for a complete discussion.

The project requires the following discretionary actions by the City:

- Rezone the site's current designation of C-M (Commercial-Industrial) to an R-5-P zone (Multiple Units, 19 to 24 Units/Acre, Parking Overlay). The "P" parking overlay would allow nonresidential parking on the site.
- Five variances:
 - <u>Building Height.</u> The municipal code for condominiums specifies a 35-foot height and two-story maximum. Along the outside edge of the property, the building would be three stories high with two four-story towers, containing eight residential units. In addition, the peak of the roof extends to approximately 60 feet.
 - □ <u>Lot Coverage.</u> The parking structure occupies more than 60% of the site, which is the maximum for an R-5 zone.
 - □ Enclosed Retail Parking. The municipal code specifies "open air" temporary parking of automobiles within a Parking Overlay District. A variance is needed to enclose the parking stalls.
 - □ 200 parking spaces are required for condominiums, and the variance would allow 162 parking spaces.
 - □ A variance is needed to allow the use of tandem parking for 34 of the required parking spaces.
- Tentative Tract Map Condominium Purposes.
- Site plan review for compliance with the City's zoning limitations.
- Design review of the building's architecture for compliance with the City's design standards.
- Conditional use permit to allow the condominium and townhouse as well as the R-5 development standards to be evaluated as to their applicability to and possible modification for senior citizen housing in an R-5 residential zone.
- Development incentive density bonus to allow a higher density than permitted by the R-5 zone.

The proposed project includes applications for the discretionary items listed above. These actions would not result in adverse physical environmental impacts. With approval of the zone change, variances, conditional use permit, and other city actions, the project would not result in significant impacts related to consistency with land use plans for the site. The Alternative Development Scenario would require the same discretionary and other approvals.

c. No Impact. The project is located in an urbanized setting and no locally designated species or natural communities are known to exist in the project area. The site is not part of any habitat conservation plan or natural community preservation plan. No impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
X.	MINERAL RESOURCES. Would the project:				
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				•
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				•

- a. **No Impact.** There are no areas in or around the project site that are designated as significant mineral aggregate resource areas. The project site and surrounding areas are located within a mineral resource zone classified as MRZ-3. This zone is defined as "areas containing mineral deposits the significance of which cannot be determined" (California Department of Conservation, Division of Mines and Geology 1994). Since the significance of the deposit is unknown, and because the project site would be considered too small in comparison to the required area needed to conduct mining operations, no project-related mineral resource impacts would occur. Additionally, mining on the site would be infeasible due to land use compatibility conflicts. No impacts would occur.
- b. **No Impact.** Although the status of mineral resources on this site is unknown, there are no plans for current or future mining operations; therefore, the project would not result in the loss of a locally important mineral resource. No impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
XI.	NOISE. Would the project:				
a.	Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?		•		
b.	Expose persons to or generate excessive groundborne vibration or groundborne noise levels?		•		
c.	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			•	
d.	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		•		
e.	Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?				•
f.	Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?				•

a. Less Than Significant with Mitigation Incorporated. The existing noise environment in the project area is dominated by noise from vehicular traffic traveling on Moran Street and Bishop Place. Auto shop operations located directly west of the project site across Moran Street are also a significant source of noise. Short-term and long-term noise monitoring was conducted in the project area between February 5, 2004 and February 9, 2004 to characterize weekday and weekend noise conditions. A detailed noise study was prepared by Jones & Stokes in March 2004 and revised in June 2004. The revised noise study is included in its entirety in Appendix C. This study is summarized below.

Construction Noise

Residences along the west side of the Bolsa Verde Estates Mobile Home Park are the closest sensitive receptors to project site. Construction noise within 50 feet of equipment may be as high as 92 dBA. However, because of the unknown site soil conditions and liquefaction zone designation, pile driving may be required during construction. If pile driving is required, and depending on type of driver, noise levels could increase to 101 dBA at 50 feet. A 6-foot wall separates the mobile home park from the project site, which would reduce construction noise by approximately 5 dB where the wall obstructs the line of sight from the noise source to the receptor. Construction noise would be temporary and would occur over a relatively short period of time. Construction noise is exempt from

the noise ordinance between 7:00 a.m. and 8:00 p.m., Monday through Saturday. Construction conducted outside these hours could violate the City's noise ordinance standards and result in significant noise impacts. Implementation of the following mitigation measures will ensure compliance with standard city conditions and reduce construction noise impacts to a less-than-significant level.

Mitigation Measures

- MMXI-1: Construction activities shall only occur between the hours of 7:00 a.m. and 8:00 p.m., Monday through Saturday. This measure shall be made a condition of the construction contract.
- MMXI-2: Prior to and during construction, project applicant shall comply with the City General Plan Policies VB2-1 and VB2-2. To comply with City Policies VB2-1 and VB2-2, an acoustical study and construction mitigation plan shall be implemented. Mitigation should include, but not be limited to, the following.
 - Locate equipment as far from noise-sensitive receptors as practicable. All stationary noise-generating equipment, such as pumps and generators, will be located as far as possible from nearby noise-sensitive receptors as practicable. Where practicable, noise-generating equipment will be shielded from nearby noise-sensitive receptors by noise-attenuating buffers such as structures or haul truck trailers. Stationary noise sources located less than 300 feet from noise-sensitive receptors will be equipped with noise-reducing engine housings. Portable acoustic barriers will be placed around noise-generating equipment located within 200 feet of residences. Water tanks and equipment storage, staging, and warm-up areas will be located as far from noise-sensitive receptors as possible.
 - Use sound-control devices on combustion-powered equipment. All construction equipment powered by gasoline or diesel engines will be required to have sound-control devices at least as effective as those originally provided by the manufacturer. All equipment will be operated and maintained to minimize noise generation. No equipment will be permitted to have an unmuffled exhaust.
 - Shield/shroud any impact tools used during demolition of existing infrastructure.
 - Shut off Mobile noise-generating equipment and machinery when not in use.
 - Use shortest traveling routes, when practicable. Construction vehicles accessing the site will be required to use the shortest possible route to and from local freeways, provided the routes do not cause nuisance noise to receptors along the route.
 - Project applicant shall disseminate essential information to residences and implement a complaint response/tracking program. Prior to construction, the project applicant shall notify residences within 500 feet of the construction area of the construction schedule for the proposed project. The notice shall be sent via certified mail to residents. The project applicant shall submit a radius map, list of residents, and copy of the notice to the City of Westminster Planning Department. The project applicant and the construction contractor shall be designated as noise disturbance coordinators and shall be responsible for responding to complaints regarding construction noise. The coordinators shall determine the cause of the complaint and shall ensure that reasonable measures are implemented to correct the problem. A contact telephone number for the noise disturbance coordinator shall be conspicuously posted on

construction site fences and shall be included in the written notification of the construction schedule sent to residents.

MMXI-3: Throughout the construction period, the contractor shall implement additional noise mitigation measures at the request of the City or county. Additional measures may include changing the location of stationary noise-generating equipment, shutting off idling equipment, rescheduling construction activity, installing acoustic barriers around stationary sources of construction noise, using alternative equipment or construction methods that produce less noise, and other site-specific measures, as appropriate.

Operational Noise

To assess traffic noise impacts on the surrounding noise-sensitive land uses, the City's threshold of 60 dBA (decibels above reference noise adjusted) for residential land uses is used along with the change in traffic noise predicted to result from project implementation. The project or Alternative Development Scenario would not substantially change traffic noise conditions in the project area. This impact is therefore considered to be less than significant.

Although not required as part this CEQA analysis, this Initial Study evaluates the exposure of future residents of the project to the surrounding noise environment. This analysis was conducted primarily to assess the affects of noise from the auto service shops along the west side of Moran Street, directly across from the project site.

The noise model indicates that traffic noise would exceed City's threshold for exterior noise of 60 Ldn closer than 65 feet from Moran Street and 95 feet from Bishop Place. Because primary outdoor activity areas would be located beyond this distance, the exposure of the future residents to exterior traffic noise is considered to be less than significant.

Residential building structures would be approximately 35 feet from the centerline of Moran Street and approximately 65 feet from the centerline of Bishop Place. The traffic noise modeling results indicate that the building facades facing Moran Street would be exposed to traffic noise of about 65 Ldn and facades facing Bishop Place would be exposed to traffic noise of about 44 Ldn. Standard building construction will typically provide 15 to 20 dB of exterior-to-interior noise reduction with window closed. This indicates that interior noise levels could exceed the state interior noise standard of 45 Ldn.

Short-term maximum sound levels at the project site were recorded as high as 88 dBA from traffic and activity at auto service facilities across Moran Street. Standard building construction typically provides 15 to 20 dB of exterior-to-interior noise reduction with window closed. This indicates that residences could be exposed to interior noise in excess of the City's interior noise standard of 55 dBA during the day and 45 dBA at night. Surrounding noise is also expected to exceed the state interior noise standard of 45 Ldn.

Because interior noise levels are expected to exceed state and city interior noise standards, this impact is considered to be significant. Compliance with the following state standard condition would ensure that impacts are reduced to a less-than-significant level.

Mitigation Measures

MMXI-4: The project applicant shall retain a qualified acoustical consultant to design treatments for the residential units such that interior noise levels comply with the requirements of Article 4 of the California Administrative Code (California Noise Insulation Standards,

Title 25, Chapter 1) so that interior noise levels do not exceed 45 Ldn. The design shall meet the City interior noise standard of 55 dBA between the hours 7:00 a.m. and 10:00 p.m. and 45 dBA between the hours of 10:00 p.m. and 7:00 a.m. Treatments may include but are not limited to installing acoustically rated windows and avoiding sound transmission paths through vents or other openings in the building shell. If it is required that windows be closed, forced fresh air ventilation shall be required.

- MMXI-5: The project applicant's acoustical consultant shall prepare a report detailing the acoustical treatments to be applied to the building for compliance with the interior noise standards. The report shall be reviewed and approved by the City prior to issuance of the building permit.
- b. Less Than Significant with Mitigation Incorporated. Construction activities associated with grading and excavation may result in ground vibration. Pile-driving activities could potentially occur during construction of the project. The results indicate that impact pile driving may exceed a peak particle velocity of 0.2 inches per second at buildings located within approximately 60 feet. Because the closest sensitive receptor is approximately 60 feet east of the potential pile driving activity location, the vibration impact would be significant. Implementation of Mitigation Measure MM-6 would reduce this impact to a less-than-significant level.
 - MMXI-6: If pile driving is required, the project applicant shall retain a qualified vibration consultant to identify pile driving equipment and methods necessary to limit ground vibration from pile driving to 0.20 inches per second at the nearest structures. Use of a vibratory driver rather than an impact driver or limiting the minimum distance between impact drivers and structures are methods than can be used to limit vibration.
- c. **Less-Than-Significant Impact.** The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity. For the purposes of this assessment, a change less than 5 dB is not considered substantial. The proposed project is not anticipated to result in any increase in traffic noise. This impact is therefore considered to be less than significant.
- d. Less Than Significant with Mitigation Incorporated. Noise impacts associated with project construction will result in temporary or periodic increases in ambient noise levels. However, construction-related increases in noise are anticipated to be short-term, due to the temporary nature of construction. In addition, implementation of Mitigation Measures MMXI-1 through MMXI-3 is expected to reduce construction noise to acceptable levels. It should be noted that employment of all feasible noise attenuation devices and techniques may be capable of reducing noise levels for stationary equipment to some degree, but trucks and other mobile equipment cannot be surrounded by noise barriers at all locations. However, construction noise associated with hauling of material is periodic in nature and would be restricted to daytime hours, similar in nature to existing vehicle noise, and all construction activity would be in accordance with standard noise control measures. With implementation of Mitigation Measures MMXI-1 through MMXI-3, construction noise impacts would be reduced to levels considered to be less-than-significant.
- e. **No Impact.** The proposed project is not located within a 2-mile radius of an airport; therefore, no noise impacts related to air traffic are expected. No impacts would occur.
- f. **No Impact.** The proposed project is not located within the vicinity of a private airstrip. No impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
XII.	POPULATION AND HOUSING. Would the project:				
a.	Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?			•	
b.	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?				•
c.	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?				•

- a. **Less-Than-Significant Impact.** Future residents of the project are expected to relocate from other locations within Westminster; therefore, the project would not result in significant changes to the city's current population. However, if all the future residents relocated from areas outside Westminster, the project would result in direct population growth of between 126 (one person per bedroom) and 252 people (2 people per bedroom). This represents a maximum 0.3-percent growth in population considering the total population (88,207) of the city (Myoc.com 2004), which is not considered substantial. The project is located within an urban area with existing public services and infrastructure that can accommodate the proposed development. Additionally, the project would not enable future growth by providing additional services where none currently exist. Impacts would be less than significant.
- b. **No Impact.** The project site is currently vacant; therefore, the project would not displace any housing. No impacts would occur.
- c. **No Impact.** The project site is currently vacant; therefore, implementation of the project would not result in the loss of any homes or displace any people. No impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
XIII.	PUBLIC SERVICES. Would the project:				
a.	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
	1. Fire protection?				
	2. Police protection?			•	
	3.Schools?				•
	4.Parks?		•		
	5.Other public facilities?				

Fire Protection

a1. Less-Than-Significant Impact. Implementation of the project would contribute additional demand for fire protection and emergency medical services, including possible additional wear on fire equipment and increased use of medical supplies. The site is currently vacant; therefore, implementation of the project would result in a direct increase of fire service responses to the site. OCFA provides fire protective services to Westminster from three OCFA fire stations. The nearest fire station, Station 66, is located at 15061 Moran Street and is located less than 0.12 mile from the project site. Based on the small size of the project and the short distance to the nearest fire station, the increase in service demand would not require new or additional fire facilities. Emergency vehicle access for the project would be provided by three access points: two on Moran Street and one on Bishop Place. Additionally, several pedestrian gates would be provided. Emergency fire and medical vehicles would have free access through these gates. Prior to final site plan approval, the applicant will submit plans to the department for review of compliance with applicable water pressure and fire equipment regulations. Impacts would be less than significant.

Police Protection

a2. **Less-Than-Significant Impact.** The Westminster Police Department provides police services to Westminster and is located at 8200 Westminster Boulevard, approximately 1.5 miles northwest of the project site. The Westminster Police Department provides several types of law enforcement services, including narcotic enforcement, gang suppression, animal control, problem-oriented policing, and administration of the DARE Program (City of Westminster 1996). Westminster Police Department staff comprises 149 full-time employees, including 105 sworn officers and 44 full-time support staff. It serves a population of approximately 88,207, with an officer/population ratio of 1:840 or about 1.2

officers per 1,000 people. The Westminster Police Department also has volunteer and part-time staff that includes six dispatchers, four parking control officers, 25 reserve officers, 20 Explorer Post #810 members, 15 Interns, and 10 Chaplains. The project site is located within the Westminster Police Department's District 34, Beat E, which is generally located east of Magnolia Street, south of Bolsa Avenue, west of Bushard Street, and north of MacFadden Avenue (City of Westminster 2004). The project may increase Westminster's population by a maximum of 0.3 percent and is not expected to place a significant added burden on the Westminster Police Department. Additionally, the department is currently patrolling the project site and surrounding areas. Emergency vehicle access for the project would be provided by three gated driveways and several pedestrian gates. Emergency police vehicles would have free access through these gates. Prior to final site plan approval, the applicant would submit plans to the department for review of compliance with applicable safety regulations. The project would not require new or additional police facilities. Impacts would be less than significant.

Schools

a3. **No Impact.** School services in Westminster are provided by four school districts: the Westminster School District, the Garden Grove Unified School District, the Ocean View School District, and the Huntington Beach Union High School District. The four districts have 23 school facilities that serve students in Westminster (City of Westminster 1996). The demand for new schools is generally associated with population increases or impacts on existing schools. Because the proposed project would be a senior citizen residential development and would not be associated with an increase in children or demand on area schools, no impacts would occur.

Parks

a4. **Less Than Significant with Mitigation Incorporated.** The demand for parks is generally associated with the increase of housing or population in an area. The project has the potential of increasing the city population by a maximum of approximately 252 people. This increase is not considered a substantial increase and would not have any significant impact on existing park use.

These new residents would be served by 10 parks within the vicinity. Parks within 1 mile of the project site include: Westminster Park, Roger Stanton Park, Park West Park, Palos Verdes Park, Honeysuckle Park, Clover Dale Park, Elden F. Gilespie Park, Bowling Green Park, New Castle Park, and Coronet Park. Additionally, Mile Square Regional Park, which includes picnicking areas, paved walks, and three golf courses, is located approximately 1.5 miles southwest of the project. The Fountain Valley Recreation and Cultural Center would also be available for use by future residents.

Although this project would not have a significant impact on parks in the area, payment of park fees is required. In accordance with the Quimby Act (California Government Code Section 66477), the City of Westminster General Plan Policies IIA 5-1 and IIA 5-2, and Programs IIA.1 through IIA.3, new residential housing projects are be required to dedicate land (parkland-to-population ratio of 3 acres for every 1,000 people), pay in-lieu fees, or a combination of both to provide recreational facilities. For this project, a fee would be required in lieu of park dedication, in conformance with Westminster Municipal Code Section 16.12. This fee is assessed based on the number of homes in the tract and the valuation of the land, based on a Member of the Appraisal Institute (MMAI) report prepared for this project. Implementation of the following mitigation measure would reduce impacts to a less-than-significant level.

Mitigation Measure

MMXIII-1: Prior to the issuance of a building permit, project applicant shall pay in-lieu park fees beyond those credited for dedication for the provision of parks.

Other Public Facilities

a5. **No Impact.** The project would not require any other new or altered service facilities. No impacts would occur

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
XIV.	RECREATION. Would the project:				
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				
b.	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				•

- a. **No Impact.** The increase in the use of recreational facilities is generally a result of significant population growth in an area. The project has the potential of increasing the city population by a maximum of approximately 252 people. This would not result in a demand for new parks or cause substantial physical deterioration of existing parks. Additionally, no existing parks would be impacted by the project construction. No impacts would occur.
- b. **No Impact.** The project would not include any parks or public recreational facilities, or result in the demand for new recreational facilities. The project includes a private recreational clubhouse, but impacts associated with the construction of this facility are considered in conjunction with the rest of the project. No impacts would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
XV.	TRANSPORTATION AND TRAFFIC. Would the project:				
a.	Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?			•	
b.	Cause, either individually or cumulatively, exceedance of a level-of-service standard established by the county congestion management agency for designated roads or highways?			•	
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				•
d.	Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		•		
e.	Result in inadequate emergency access?			•	
f.	Result in inadequate parking capacity?		•		
g.	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				

A traffic impact study was prepared by Linscott, Law and Greenspan Engineers (LLG), a transportation planning and engineering firm, in February 2004 and revised in June 2004. The traffic study analyzed the potential changes in traffic volume and patterns, and the resulting impacts to area intersections from implementation of the project. The traffic study complies with the City's traffic impact requirements and is consistent with the current Congestion Management Program (CMP) for Orange County. The following discussion summarizes the results of the study, which is included in its entirety in Appendix D.

a. **Less-Than-Significant Impact.** The project would result in additional traffic on the local roadway network in the vicinity of the project site. The traffic study addresses existing conditions, future baseline conditions without the project (which addresses the opening year for the project in 2005 and includes one cumulative project that is planned within the project study area and ambient growth), and future conditions with the project. The volume-to-capacity (V/C) characteristics and level of service (LOS) investigations for the AM and PM Peak Hour at key intersections were used to

evaluate the potential traffic-related impacts associated with the anticipated area growth and development the project.

Existing Conditions

The principal local network of streets serving the project includes Bishop Place, Moran Street, Bolsa Avenue, and Magnolia Street.

- Bishop Place is a two-lane, undivided, east-west Residential Collector roadway along the south project frontage. Parking is permitted along both sides of this roadway, and the speed limit is 25 miles per hour (mph).
- Moran Street is a two-lane, undivided, north-south Residential Collector roadway along the west project frontage. Parking is permitted primarily along the east side of this roadway, and the west side of Moran within the vicinity of the project site is occupied primarily by auto repair and retail uses with multiple driveways. The speed limit on Moran Street is 25 mph.
- Bolsa Avenue is a major east-west, six-lane, divided major arterial. Parking is not permitted along either side of this roadway, and the speed limit is 40 mph.
- Magnolia Street is a six-lane, divided, north-south roadway. Parking is generally not permitted along either side of this roadway, and the speed limit is 45 mph.

Peak period traffic counts were conducted at the following eight intersections to determine existing LOS:

- Magnolia Street at Bolsa Avenue (signalized),
- Asian Village/Cultural Court at Bolsa Avenue (signalized),
- Moran Street at Bolsa Avenue (stop-controlled northbound and southbound) (this intersection will be signalized by June 2004),
- Bushard Street at Bolsa Avenue (signalized),
- Brookhurst Street at Bolsa Avenue (signalized),
- Magnolia Street at Bishop Place (signalized),
- Moran Street at Bishop Place (stop-controlled southbound), and
- Bushard Street at Bishop Place (signalized).

According to City criteria, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours. Table 3-2 summarizes the existing peak hour service level calculations for the eight study intersections based on existing traffic volumes.

Table 3-2. 2004 Existing Peak Hour LOS

Key Intersection	Time Period	ICU Delay (sec/vehicle)	LOS
Magnolia Street at Bolsa Avenue	AM	0.518	A
	PM	0.798	C
Asian Village at Bolsa Avenue	AM	0.365	A
	PM	0.491	A
Moran Street at Bolsa Avenue	AM	3.2	A
	PM	5.6	A
Bushard Street at Bolsa Avenue	AM	0.577	A
	PM	0.844	D
Brookhurst Street at Bolsa Avenue	AM	0.714	C
	PM	1.084	\mathbf{F}
Magnolia Street at Bishop Place	AM	0.414	A
	PM	0.580	A
Moran Street at Bishop Place	AM	2.6	A
	PM	5.8	A
Bushard Street at Bishop Place	AM	0.550	A
	PM	0.318	A
Note:			
Bold denotes locations exceeding LOS D.			

Table 3-2 indicates that one study intersection currently operates at an adverse level of service (LOS F) during the PM Peak Hour. The remaining seven key intersections currently operate at LOS D or better during the AM and PM Peak Hours.

Project Trip Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. The proposed project is expected to generate 1,543 daily trips with 40 trips (24 inbound, 16 outbound) in the AM Peak Hour and 66 trips (33 inbound, 33 outbound) in the PM Peak Hour.

2005 horizon year background traffic includes a 2-percent ambient growth factor, which covers unknown and future related projects in the study area and regular growth in traffic volumes due to the development of projects outside the study area. One planned and/or approved project within the project study area is taken into account. The planned project is a 13,300-square-foot, two-story office/bank building on the southwest corner of Magnolia Avenue and Westminster Boulevard.

For the future (2005) background traffic conditions without the project and the year 2005 background condition with project traffic, ambient traffic growth and cumulative traffic will cause the study intersection of Brookhurst Street at Bolsa Avenue to continue to operate at an adverse level of service. The remaining seven key intersections will continue to operate at LOS D or better during the AM and PM Peak Hours. However, the project would not exceed City of Westminster traffic impact criteria; therefore, the project will not significantly impact any of the eight key study intersections.

Impacts would be less than significant.

The project applicant has proposed a potential Alternative Development Scenario for the project site. The alternative involves additional parking to be provided for retail customers and employees. This extra parking is beyond the 162 spaces designated for the condominium residents and the 120 spaces designated for commercial use in the proposed plan. This alternative proposes moving 16 condominium units on Level 1 to Level 4, to allow for the provision of approximately 80 or more additional parking stalls to be used by retail customers and employees of the shops located in the nearby Asian Garden Mall. The additional retail parking spaces would be located adjacent to proposed retail parking spaces, and would be separated from the residential parking.

To analyze the potential traffic impacts associated with this alternative, Jones & Stokes calculated trip generation based on the revised tables in the Updated Traffic Impact Analysis Report (June 2004). This analysis is included in a memo included at the end of Appendix D.

Based on the Moran Senior Condominium Project generating 1,543 daily trips, the Alternative Development Scenario could generate an additional 851 daily trips and remain below the 2,400 threshold. This equates to 88 additional retail parking spaces (219 total retail parking spaces). The Alternative Development Scenario would not have a significant impact at any of the study intersections and would not exceed the minimum evaluation threshold for the CMP Highway System or the City of Westminster intersection LOS standard. Based on the analysis, the Alternative Development Scenario could add a maximum of 88 retail paid parking spaces. It would not have a significant impact on the Westminster street system or require an evaluation under the CMP Highway System guidelines; therefore, no traffic impacts would occur with the addition of a maximum of 88 parking spaces.

- b. **Less-Than-Significant Impact.** The project would not cause an exceedance of a LOS standard established by the County Congestion Management Agency for designated roads or highways. The CMP requires that a traffic impact analysis be conducted for any project generating 2,400 or more daily trips, or 1,600 or more daily trips for projects that directly access the CMP Highway System. The project is projected to generate approximately 1,543 daily trip-ends, and the Alternative Development Scenario would generate 2,394 daily trips. Neither the project nor the Alternative Development Scenario meet the analysis criteria and would not have any significant traffic impacts on the CMP Highway System.
- c. **No Impact.** The proposed project would not affect air traffic patterns. The project is not located in the vicinity of an airport or private airstrip, nor would it include any structures that would extend into the air and affect aircraft circulation. No impacts would occur.
- d. **Less Than Significant with Mitigation Incorporated.** The project may increase hazards due to design features. Access to the project would be provided via three access driveways (one full-movement driveway on Bishop Place and two full-movement driveways on Moran Street).

Based on the anticipated project traffic volumes, the project driveways can accommodate ingress and egress traffic. The proposed lengths of the residential parking access ramps would be sufficient. However, for the paid parking lot, based on a queuing evaluation, depending on the location of the gate for the paid parking lot, the parking access ramps may be too short, resulting in vehicles backing up into Moran Street traffic lanes. Incorporation of Mitigation Measure MMXV-1 would reduce queuing impacts to less-than-significant levels.

Operations at the three driveways are expected to provide adequate access opportunities for the project. However, because of the heavy traffic along Moran Street and Bishop Place and the potential for landscaping or parked vehicles to obscure clear views of oncoming traffic for exiting vehicles, a

potential vehicle and/or pedestrian hazard may occur. To ensure adequate sight distances are provided, Mitigation Measure MMXV-2 is required.

The proposed project may also result in hazards to pedestrians. The majority of the parking is being provided for Asian Garden Mall retail shoppers. Parking needs of local businesses along Moran Street would also be provided. The mall has more than 400 different stores and serves as the commercial, cultural and social center for the Vietnamese American and wider Asian populations in Southern California, and has also evolved as a tourist destination from around the world (Vinacity.com 2004). The parking is physically separated from the mall, and the city's suggested route between the two is from the parking garage pedestrians would exit and travel south along the new sidewalk to Moran Street/Bishop Place intersection; cross to the west and walk along the existing sidewalk to the Asian Garden parking lot entrance on Bishop Place; then through the parking lot along the drive aisle to the mall (approx. 1,100 feet, just under a quarter mile).

It is not unreasonable to assume most pedestrians will pick the shortest route, which would be a midblock crossing and approximately 600 ft. to the mall. It is estimated that between 1,000 and 3,000 pedestrians a day may cross Moran Street (based on two people per car with a 2-hour turnover during peak shopping hours, 9:00 a.m. to 7:00 p.m.). The potential high volume of pedestrians, the lack of sidewalks on Moran Street beyond the project frontage, and vehicular traffic all combine to create the potential for traffic accidents. The Alternative Development Scenario would increase the number of parking spaces and the number of pedestrians. In accordance with City direction, Mitigation Measures MMXV-3, MMXV-4, and MMXV-5 would reduce this impact to less-than-significant levels.

Mitigation Measures

- MMXV-1: To accommodate a storage length of one vehicle, project designs shall place the gated entry into the retail parking area a minimum of 20 feet beyond the west edge of the sidewalk. Project designs shall be approved by City traffic engineers and followed during construction of the project.
- MMXV-2: To ensure adequate sight distances at the project driveways:
 - Landscaping plants that are placed within a 50-foot by 10-foot triangle at the intersection of the Moran Street and Bishop Place driveways shall be maintained at a maximum height of 18 inches above the sidewalk elevation.
 - Placement of street trees shall be approved by the City Engineer.
 - Parking shall be prohibited within 25 feet of the Moran Street and Bishop Place driveways.
- MMXV-3: Project applicant shall install a sidewalk along the property frontage on Bishop Place and Moran Street prior to certificate of occupancy.
- MMXV-4: Prior to issuance of a certificate of occupancy, the project applicant shall install a crosswalk at the intersection of Bishop and Moran Streets connecting the east and west sides of Moran Street. Crosswalk shall comply with City of Westminster standards.

- MMXV-5: Prior to issuance of a certificate of occupancy, Project applicant shall install two types of street signs:
 - "For your safety, please cross the street at the crosswalk" or similar standard City-approved sign shall be placed in a location prominently visible from all pedestrian access routes to the lower level garage
 - "Pedestrian Crossing," "Yield to Pedestrian," or similar standard City-approved sign shall be placed and visible from southbound drivers on Moran Street.

Each of the pedestrian safety signs shall also include a directional arrow and "Asian Garden Mall" to direct pedestrians to the safest walking route to the mall.

- e. **Less-Than-Significant Impact.** The project would not result in inadequate emergency access. Additionally, the project would not affect existing emergency access routes. All appropriate fire and emergency access conditions would be incorporated into the design of the project. Prior to final site plan approval, the applicant will submit plans to the Westminster Police and Orange County Fire Authority for review of compliance with applicable regulations. Impacts would be less than significant.
- f. Less Than Significant Impact. The project would provide 162 resident/guest parking spaces on site within the two levels of parking below the building. The City of Westminster Zoning Code for condominiums requires 2 parking spaces per unit plus an addition ½ parking space per unit for guest and overflow parking. Compliance with this code would require the 80-unit project to provide 200 parking spaces. The Zoning Code currently does not have a parking standard for senior housing developments. Therefore, based on the parking ratio approved by the City for other recent senior housing developments, one parking stall per bedroom has been recommended by the City, which would require 126 parking spaces (46 two-bedroom and 34 one-bedroom units). As a result, adequate residential parking would be provided with a parking surplus of 36 parking spaces. However, a variance is required to allow a reduction in the number of spaces allowed by the City for condominium housing projects, from 200 to 162. The project would provide 120 retail paid parking spaces for the near by retail center. As part of the Alternative Development Scenario the project would provide up to an additional 88 retail paid parking spaces. The paid parking would not be provided as part of a new retail/commercial development; therefore, no parking standard applies.
- g. **Less-Than-Significant Impact.** The project would not conflict with adopted policies, plans, or programs supporting alternative transportation. The project site is served by OCTA bus route #33 along Magnolia Avenue, #64 along Bolsa Avenue, #66 along McFadden Avenue, and #35 along Brookhurst Street. Additionally, the project is within walking distance of the Asian Garden Mall, which provides for most of the community's retail needs. No significant impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
XVI.	UTILITIES AND SERVICE SYSTEMS. Would the project:				
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			•	
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			•	
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			•	
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?			•	
e.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			•	
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			•	
g.	Comply with federal, state, and local statutes and regulations related to solid waste?				•

a. Less-Than-Significant Impact. The project site is located within the service area of the Santa Ana Regional Water Quality Control Board (RWQCB). The operation of the project would not exceed the wastewater treatment requirements of the Santa Ana RWQCB. The site is not currently generating any municipal wastewater because the site is vacant. However, the 80-unit residential project would not result in discharges that cannot be adequately treated by the existing wastewater treatment system (see analysis below). It is anticipated that only domestic wastewater would be discharged during operation of the project and would be adequately treated without exceeding treatment plant capacity or requirements.

Because the subterranean parking garage would be constructed and would operate underground in an area subject to shallow groundwater levels, it may be subject to inundation by groundwater. This would be handled by sump pumps discharging into storm drains or sanitary sewers. If the construction or operation of the project requires dewatering activities to discharge into the sanitary

sewers, it is anticipated that current treatment facilities have the capacity for the additional flow. Therefore, wastewater treatment requirements would not be exceeded and impacts would be less than significant.

b. **Less-Than-Significant Impact.** The project would not result in either a need for new systems or supplies, or substantial alterations to local or regional water or wastewater treatment facilities.

Domestic water supply for Westminster is currently imported via pipeline from MWD and from groundwater sources. Approximately 34 percent of Westminster's water supply is purchased from MWD and is distributed by the Municipal Water District of Orange County. MWD's water supply comes from the Colorado River and the State Water Project, which draws water from the San Francisco-San Joaquin Bay Delta in northern California and transports it via water aqueducts to the south region. The remaining 66 percent of water is pumped via wells (14 of which are located in Westminster) from the Santa Ana River Basins. The Orange County Water District regulates withdrawal from the basin (City of Westminster 2003). The project would use approximately 2,200 gallons of potable water per acre per day. This would result in a total of approximately 4,480 gallons per day. The projected demand is considered negligible in comparison to total supply. Existing treatment facilities and other infrastructure such as water lines are expected to be adequate, and the expansion of existing facilities would not be required. Therefore, impacts to water facilities would be considered less than significant.

Wastewater services for the project area are provided by the Midway City Sanitary District. Midway City Sanitary District has sewage feeder lines ranging between 8 and 12 inches in diameter that connect to the county's trunk sewer lines. Midway City Sanitary District facilities are currently operating at one-third capacity without any functional problems and have room for substantial growth (City of Westminster 1996). The sewage is delivered via the county trunk lines to the Orange County Sanitation District's Plants No. 1 and No. 2 for treatment. Plant No. 1 has a design capacity of 121 million gallons per day (mgd), and Plant No. 2 has a capacity of 172 mgd. Average daily flow to both Plants No. 1 and No. 2 is 83 mgd and 151 mgd, respectively. Wastewater at present levels leaves an additional total capacity of 59 mgd for both plants combined (Nazaroff pers. comm.).

The project is estimated to generate approximately 16,535 gallons of wastewater per day (gpd) (Orange County Sanitation District wastewater flow coefficients - 7,516 gpd/acre) (Nazaroff pers. comm.). Therefore, the expected volume of wastewater to be generated by the project would be less than .01%, which is negligible compared of the total capacity of the sewage treatment system. Impacts are less than significant.

c. Less-Than-Significant Impact. The project would not result in a need for new or substantial alterations to the existing storm drain system. Stormwater runoff within Westminster travels to City-maintained network drainage facilities, then into regional drainage channels owned and maintained by the Orange County Flood Control District. Drainage from the site would occur via sheetflow in the surrounding street gutters. The stormwater runoff would flow to an underground 42-inch storm drain along Bolsa Avenue, which then becomes 48 inches at Weststate, then to Magnolia, Eden (72 inches), Newland (75 inches), and finally to the East Garden Grove-Wintersburg Channel (Ilkhanipour pers. comm.), approximately 0.5 mile southeast of the project site. Drains are expected to have adequate capacity to serve the project. Additionally, although the East Garden Grove Wintersburg Channel flows at 80 to 90 percent of capacity during peak flows (City of Westminster 1996), the project is expected to contribute such a small volume of flow that the channel is expected to have adequate capacity (Almendralo pers. comm.). Also, although the project site is presently vacant and unvegetated, the area contains compacted soil that does not facilitate absorption of large amounts of stormwater. Because the project would be approximately 25 percent occupied by

landscaping, runoff would be similar to current conditions. The capacity of the local storm drains and flood control channel would be adequate to serve the project. Impacts would be less than significant.

d. **Less-Than-Significant Impact.** The project would be served by existing water entitlements and resources. Westminster's domestic water supply is currently imported via pipeline from MWD (34 percent) and from groundwater sources regulated by Orange County Water District (66 percent) (City of Westminster 2003).

Westminster's Water Facilities Master Plan has identified some deficiencies in the water system (City of Westminster 1996). Improvements outlined in the plan would improve production and distribution facilities. However, the project is not expected to require a substantial amount of water and would not substantially deplete the existing water supply. Additionally, future residents of the housing complex are currently using water drawn from the same source; therefore, no increases in demand would occur. Impacts to water supplies would be less than significant.

- e. **Less-Than-Significant Impact.** The wastewater generated from the project would be treated by Orange County Sanitation District's Plants No. 1 and No. 2., which have a combined treatment capacity of 293 mgd (Nazaroff pers. comm.). Because the project's contribution to this flow would be negligible, the remaining capacity of the Orange County Sanitation District's facilities would be adequate. Additionally, future residents of the housing complex are currently generating wastewater traveling to the same treatment plant; therefore, no increases in treatment would occur. Impacts would be less than significant.
- f. Less-than-Significant Impact. Solid waste services in the project area are provided by Rainbow Disposal, as contracted through the Midway City Sanitation District. According to the California Integrated Waste Management Board, each Westminster resident generates approximately 1.8 pounds of waste per day (California Integrated Waste Management Board 2004). Considering that the project will be occupied by a maximum of 250 future residents, the project is estimated to generate approximately 440 pounds per day. City standards state, "areas for refuse and recyclable material storage shall be adequate in capacity, number, and distribution to serve the development. . ." The project would comply will all City standards for adequate number of trash bins.

Waste would be picked up and transported by Rainbow Disposal to its privately owned Material Recovery Facility in Huntington Beach. In accordance with AB 939, recyclable materials and green waste are removed from the waste stream and the overall trash volume is reduced by approximately 50 percent. This would result in approximately 1.27 tons of waste per week being disposed of for the project. Upon removal of all recyclable material, the loads are transported to the Bowerman Landfill in Irvine. The Bowerman facility is located at 11002 Bee Canyon Access Road and is permitted until 2022 (County of Orange Integrated Waste Management Department 2004). The Bowerman facility accepts only municipal solid waste from commercial haulers and vehicles operating under commercial status. The landfill is permitted to receive a daily maximum of no more than 8,500 tons per day and currently receives an average of 7,785 tons per day (Hagthrop pers. comm.).

The project would be within the service capacity of Rainbow Disposal (Moffatt pers. comm.) and would not significantly affect its capacity to haul waste within Westminster. The Bowerman facility also has adequate capacity. Additionally, future residents of the housing complex are currently generating solid waste that travels to the Bowerman Landfill; therefore, no increases in trash generation would occur. Adequate disposal capacity exists to serve the project. Impacts would be less than significant.

g. **No Impact.** The project would comply with all regulations related to solid waste. Compliance with regulations related to the California Integrated Waste Management Act, City recycling programs, and the Source Reduction and Recycling General Plan Element (City of Westminster 1996) is required. No impacts would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
XVII.	MANDATORY FINDINGS OF SIGNIFICANCE				
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?				
b.	Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)				
с.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			•	

- a. **Less-Than-Significant Impact.** The project area is highly urban in character and does not contain biological resources that would be affected by the implementation of the project. Additionally, no cultural resources, either historical or prehistorical, are expected to be affected by the construction or operation of the project. No impacts are anticipated.
- b. **Less-Than-Significant Impact.** The project does not have impacts that are cumulatively considerable. No significant impacts have been identified for the project. Additionally, no less-than-significant impacts of the project would be cumulatively considerable. No significant impacts are anticipated.
- c. **Less-Than-Significant Impact.** The project would not have environmental effects that would cause substantial adverse affects on human beings, either directly or indirectly. No significant adverse impacts have been identified for the project.

Chapter 4 **Proposed Mitigation Measures**

Proposed Mitigation Measures

Introduction

The proposed project was found to result in potential impacts unless mitigation measures are incorporated into the project. The following mitigation measures would avoid or reduce impacts to less-than-significant levels.

Impacts and Recommended Mitigation Measures Light and Glare

- MMI-1: The project applicant shall comply with City design and lighting ordinances. Prior to the City design review, the applicant shall submit a detailed lighting plan to the City of Westminster Planning Division. Approved lighting shall be incorporated into the approved building plans and construction drawings.
- MMI-2: Prior to issuance of certificate of occupancy, the lighting contractor and field crew shall ensure the following:
 - all lights shall be aimed away from adjacent streets and residences;
 - the lamp enclosures and poles shall be painted to reduce reflection; and
 - light sources shall be installed with glare shields, hoods, and/or filtering louvers sufficient to prohibit spillage of light onto adjacent residential properties.

Air Quality Standard

MMIII-1 Architectural coating activities, such as painting and stucco application, shall be limited to coating a maximum of 4,000 square feet of surface per day.

- MMIII-2 The project applicant shall implement the following NO_X-reducing practices during all construction activities:
 - use aqueous diesel fuel in all off-road diesel equipment and
 - use cool exhaust gas recirculation equipment.

Cumulative Increase in Pollutants

Implement Mitigation Measure MMIII-1.

Disturbance to Unknown Archaeological Resources

MMV-1: During construction, if buried cultural resources, such as chipped or ground stone, historical artifacts, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, the contractor shall ensure that all work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the City.

If human remains of Native American origin are discovered during project construction, compliance with state laws, which fall within the jurisdiction of the NAHC (Public Resource Code Sec. 5097), relating to the disposition of Native American burials will be adhered to. If any human remains are discovered or recognized in any location other than a dedicated cemetery, the contractor shall ensure that excavation or disturbance of the site (including any nearby area reasonably suspected to overlie adjacent human remains) shall stop until:

- 1. the coroner of the county has been informed and has determined that no investigation of the cause of death is required; and
- 2. if the remains are of Native American origin,
 - a. the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
 - the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and

disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California NAHC.

Inadvertent Discovery of Unknown Human Remains

Implement Mitigation Measure MMV-1.

Seismic-Related Ground Failure

- MMVI-1: During plan check, the applicant shall submit a geologic report to the City of Westminster Building Department to identify site conditions and potential seismic geologic hazards risk and recommend measures to reduce potential safety impacts. The project design and development shall incorporate all recommended measures outlined in the geologic report to ensure that safety is not compromised (General Plan Policies VA1-2 and VA1-3).
- MMVI-2: All grading and construction plans shall clearly indicate required mitigation measures (General Plan Policy VA1-4).
- MMVI-3 The geologic report submitted in support of the grading permit and building permit applications shall include a liquefaction study. Three copies of the report shall be submitted. Additional measures may be required for structural design and waterproofing of foundations and below grade construction. The geologic report shall be prepared by a California registered geotechnical engineer and shall provide criteria for design of foundations and underground walls and slabs, including waterproofing. The report shall be prepared according to *Guidelines for Evaluation and Mitigating Seismic Hazards in California, Chapter 6 Analysis and Mitigation of Liquefaction Hazards* (California Division of Mines and Geology 1997) and shall include results from a detailed field investigation, a geotechnical field investigation, and geotechnical laboratory testing.

This mitigation measure assumes that the geologic/soils report will conclude that the liquefaction hazard at the site can be mitigated to an acceptable factor of safety for liquefaction resistance through the implementation of methods to prevent structural damage from liquefaction. Such methods may include one or more of the following:

- excavation and removal or recompaction of potentially liquefiable materials;
- in-situ (i.e., in place) ground densification (e.g., compaction with vibratory probes, compaction grouting);

- other types of ground improvement (e.g., permeation grouting, deep drains, structural fills, dewatering);
- deep foundations (e.g., piles, piers);
- reinforced shallow foundations (e.g., grade beams, rigid raft foundations); and
- design of structures to withstand predicted ground softening and vertical and lateral ground displacement.

Soil Erosion

MMVI-4: Prior to obtaining a grading permit, the applicant shall prepare and submit an erosion control plan to the City of Westminster Engineering Department to reduce erosion of on- and offsite soils. This shall include, but not be limited to, the following measures.

- The contractor shall water the site at least twice daily to reduce potential wind erosion and fugitive dust impacts.
- The contractor shall be responsible for implementing wheel washing for the construction vehicles and equipment leaving the site to reduce deposition soil into the public right-of-way.
- During construction, the contractor shall implement street sweeping in the vicinity of the project at least once per week, or as deemed necessary by the City's Building and Engineering Departments.
- During construction, the contractor shall implement the BMPs, as identified in the erosion control plan and Storm Water Pollution Prevention Plan (SWPPP).

Unstable Soil Hazards

Implement Mitigation Measures MMVI-1, MMVI-2, and MMVI-3.

Water Quality Violations

Implement Mitigation Measure MMVI-4.

MMVIII-1: Prior to issuance of any grading permits, the applicant shall prepare an SWPPP and provide proof that a Notice of Intent (NOI) to file a National Pollution Discharge Elimination System Permit (NPDES) was filed with the Santa Ana Regional Water Quality Control Board (RWQCB). This evidence shall consist of a copy of the NOI stamped by the Santa Ana RWQCB.

MMVIII-2: Prior to the issuance of any grading permit, a Water Quality
Management Plan (WQMP) for the final detailed project designs
shall be submitted by the applicant to be approved by the City

engineer. The WQMP shall identify a program for the implementation of specific structural and non-structural BMPs to address water quality issues associated with the final detailed project design construction and development and so that predictable runoff is controlled.

MMVIII-3: Controls on operational dewatering shall be implemented during excavation and construction phases. Wastewater generated as a part of dewatering shall be discharged to the sanitary sewer for treatment at a wastewater treatment plant if possible. If discharge to surface waters is unavoidable, before engaging in dewatering activities, the applicant will obtain an individual NPDES permit from the Santa Ana RWQCB for these discharges. This permit will contain provisions that will require that discharges do not significantly degrade surface water quality, and will require a monitoring program to ensure that permit conditions are met. Water discharged into surface water facilities will be required to meet the total maximum daily load (TMDL) and NPDES limits set in Orange County's water quality permit. Erosion or Siltation Impacts

Erosion and Sediment in Stormwater Runoff

Implement Mitigation Measure MMVI-3.

Contribution to Polluted Runoff

Implement Mitigation Measures MMVI-4, MMVIII-1, MMVIII-2, and MMVIII-3.

Noise from Construction Activity

- MMXI-1: Construction activities shall only occur between the hours of 7:00 a.m. and 8:00 p.m., Monday through Saturday. This measure shall be made a condition of the construction contract.
- MMXI-2: Prior to and during construction, project applicant shall comply with the City General Plan Policies VB2-1 and VB2-2. To comply with City Policies VB2-1 and VB2-2, an acoustical study and construction mitigation plan shall be implemented. Mitigation should include, but not be limited to, the following.
 - Locate equipment as far from noise-sensitive receptors as practicable. All stationary noise-generating equipment, such as pumps and generators, will be located as far as possible from nearby noise-sensitive receptors as practicable. Where practicable, noise-generating equipment will be shielded from nearby noise-sensitive receptors by noise-attenuating buffers such as structures or haul truck trailers. Stationary noise sources located less than 300 feet from noise-sensitive receptors will be

- equipped with noise-reducing engine housings. Portable acoustic barriers will be placed around noise-generating equipment located within 200 feet of residences. Water tanks and equipment storage, staging, and warm-up areas will be located as far from noise-sensitive receptors as possible.
- Use sound-control devices on combustion-powered equipment. All construction equipment powered by gasoline or diesel engines will be required to have sound-control devices at least as effective as those originally provided by the manufacturer. All equipment will be operated and maintained to minimize noise generation. No equipment will be permitted to have an unmuffled exhaust.
- Shield/shroud any impact tools used during demolition of existing infrastructure.
- Shut off Mobile noise-generating equipment and machinery when not in use.
- Use shortest traveling routes, when practicable. Construction vehicles accessing the site will be required to use the shortest possible route to and from local freeways, provided the routes do not cause nuisance noise to receptors along the route.
- Project applicant shall disseminate essential information to residences and implement a complaint response/tracking program. Prior to construction, the project applicant shall notify residences within 500 feet of the construction area of the construction schedule for the proposed project. The notice shall be sent via certified mail to residents. The project applicant shall submit a radius map, list of residents, and copy of the notice to the City of Westminster Planning Department. The project applicant and the construction contractor shall be designated as noise disturbance coordinators and shall be responsible for responding to complaints regarding construction noise. The coordinators shall determine the cause of the complaint and shall ensure that reasonable measures are implemented to correct the problem. A contact telephone number for the noise disturbance coordinator shall be conspicuously posted on construction site fences and shall be included in the written notification of the construction schedule sent to residents.
- MMXI-3: Throughout the construction period, the contractor shall implement additional noise mitigation measures at the request of the City or county. Additional measures may include changing the location of stationary noise-generating equipment, shutting off idling equipment, rescheduling construction activity, installing acoustic barriers around stationary sources of construction noise, using alternative equipment or construction methods that produce less noise, and other site-specific measures, as appropriate.

Noise Impacts to Future Residents

MMXI-4: The project applicant shall retain a qualified acoustical consultant to design treatments for the residential units such that interior noise levels comply with the requirements of Article 4 of the California Administrative Code (California Noise Insulation Standards, Title 25, Chapter 1) so that interior noise levels do not exceed 45 Ldn. The design shall meet the City interior noise standard of 55 dBA between the hours 7:00 a.m. and 10:00 p.m. and 45 dBA between the hours of 10:00 p.m. and 7:00 a.m. Treatments may include but are not limited to installing acoustically rated windows and avoiding sound transmission paths through vents or other openings in the building shell. If it is required that windows be closed, forced fresh air ventilation shall be required.

MMXI-5: The project applicant's acoustical consultant shall prepare a report detailing the acoustical treatments to be applied to the building for compliance with the interior noise standards. The report shall be reviewed and approved by the City prior to issuance of the building permit.

Groundborne Vibration or Noise

MMXI-6: If pile driving is required, the project applicant shall retain a qualified vibration consultant to identify pile driving equipment and methods necessary to limit ground vibration from pile driving to 0.20 inches per second at the nearest structures. Use of a vibratory driver rather than an impact driver or limiting the minimum distance between impact drivers and structures are methods that can be used to limit vibration.

Temporary Noise Increases

Implementation of Mitigation Measures MMXI-1 through MMXI-3.

Impacts to Parks

MMXIII-1: Prior to the issuance of a building permit, project applicant shall pay in-lieu park fees beyond those credited for dedication for the provision of parks.

Transportation Design Hazards

MMXV-1: To accommodate a storage length of one vehicle, project designs shall place the gated entry into the retail parking area a minimum of 20 feet beyond the west edge of the sidewalk. Project designs shall be approved by City traffic engineers and followed during construction of the project.

- MMXV-2: To ensure adequate sight distances at the project driveways:
 - Landscaping plants that are placed within a 50-foot by 10-foot triangle at the intersection of the Moran Street and Bishop Place driveways shall be maintained at a maximum height of 18 inches above the sidewalk elevation.
 - Placement of street trees shall be approved by the City Engineer.
 - Parking shall be prohibited within 25 feet of the Moran Street and Bishop Place driveways.
- MMXV-3: Project applicant shall install a sidewalk along the property frontage on Bishop Place and Moran Street prior to certificate of occupancy.
- MMXV-4: Prior to issuance of a certificate of occupancy, the project applicant shall install a crosswalk at the intersection of Bishop and Moran Streets connecting the east and west sides of Moran Street.

 Crosswalk shall comply with City standards.
- MMXV-5: Prior to issuance of a certificate of occupancy, project applicant shall install two types of street signs:
 - "For your safety, please cross the street at the crosswalk" or similar standard City-approved sign shall be placed in a location prominently visible from all pedestrian access routes to the lower level garage.
 - "Pedestrian crossing" or similar standard City-approved sign shall be placed and visible from east- and westbound drivers on Bishop Place and southbound drivers on Moran Street.

Each of the pedestrian safety signs shall also include a directional arrow and "Asian Garden Mall" to direct pedestrians to the safest walking route to the mall.

Chapter 5 **References**

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Chapter 6 Report Preparation

Chapter 6

Report Preparation

Jones & Stokes was hired by the City of Westminster to conduct the analysis and write the Recirculated IS/MND document. The individuals who contributed to the preparation of this document are listed below.

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Chapter 7 **Mitigation Monitoring Plan**

Mitigation Monitoring Plan

Introduction

The California Public Resources Code, Section 21081.6, requires that a lead or responsible agency adopt a mitigation monitoring or reporting program when approving or carrying out a project for which an environmental document, either an environmental impact report (EIR) or an MND, identifies measures to reduce potential adverse environmental impacts to less-than-significant levels.

The City of Westminster is the lead agency for the Moran Senior Condominiums Project and is therefore responsible for implementation of the mitigation monitoring program. The MND that has been prepared for the project addresses the potential environmental impacts and, where appropriate, recommends measures to mitigate these impacts. As such, a mitigation monitoring plan (MMP) is required to ensure that adopted mitigation measures are successfully implemented.

Project Overview

The project site consists of five parcels totaling approximately 2.37 acres. A tentative parcel map will merge the five parcels and subdivide them into condominiums. The project site currently consists of a fairly level vacant dirt lot. The applicant/property owner, Moran Property Limited Partnership, is proposing to construct condominium units on the project site. The units will be offered for sale to the 55-and-older population.

The project would involve the development of a condominium building with a total of 80 units and an approximately 2,100-square-foot multi-purpose room. The 80 units would include 46 two-bedroom units and 34 one-bedroom units. Additionally, a courtyard and cultural garden are proposed.

The development would accommodate between 126 and 252 people.

The buildings would be required to be designed and built to comply with Little Saigon Design Standards. These standards "incorporate architectural elements similar to those found on buildings constructed in Vietnam in the early 1900's in the French Colonial tradition." Basic design themes feature elements such as

large overhanging tile roofs with eave brackets, use of columns and bright accent colors, and smooth finish stucco exteriors.

As provided in the City of Westminster Municipal Code, the zoning designation for the project site is C-M (Commercial-Industrial). As part of the project, the applicant is requesting a zone change from C-M to R-5 (Multiple Units, 19 to 24 units/acre). Additionally, a conditional use permit would be required to allow senior citizen housing in an R-5 residential zone. These actions would ensure that the project is consistent with the zoning for the site.

Additional details regarding the project are provided in the Recirculated IS/MND document prepared in accordance with CEQA.

Monitoring and Reporting Procedures

The MMP for the project will be in place throughout all phases of the project, including design, construction, and operation. The City shall be responsible for administering the MMP and ensuring that all parties comply with its provisions. The City may delegate monitoring activities to staff, consultants, or contractors. The designated environmental monitor will track and document mitigation efforts, note any problems that may result, and take appropriate action to rectify problems. The City will also ensure that monitoring is documented through periodic reports and that violations are promptly corrected.

Mitigation Monitoring Plan Implementation

Table 7-1 outlines the MMP for the project. The MMP includes:

- the impact that requires mitigation,
- the mitigation measures required,
- the project phase at which the monitoring shall occur,
- the method by which the measure shall be implemented, and
- the agency responsible for monitoring the implementation of the mitigation measures.

Certain inspections and reports may require preparation by qualified individuals; these are specified in Table 7-1. Satisfactory implementation of a mitigation measure is to be indicated through the use of a compliance verification form, which must be signed by the responsible party(ies) upon completion.

 Table 7-1. Mitigation Monitoring Program for Moran Senior Condominiums (#2003-78)

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
Aesthetics				
Glare from building and parking lot lighting may affect nighttime drivers, pedestrians, and adjacent residents.	MMI-1. The project applicant shall comply with City design and lighting ordinances. Prior to the City design review, the applicant shall submit a detailed lighting plan to the City of Westminster Planning Division. Approved lighting shall be incorporated into the approved building plans and construction drawings.	Prior to plan check.	Lighting plans shall be submitted to and approved by the Building Division and Planning Division.	Project applicant; Community Development Department— Building Division and Planning Division.
	 MMI-2. Prior to issuance of certificate of occupancy, the lighting contractor and field crew shall ensure the following: all lights shall be aimed away from adjacent streets and 	Prior to certificate of occupancy.	Lighting contractor shall manually adjust lights after installation; inspections before occupancy shall verify implementation.	Project applicant; Community Development Department— Building Division and Planning Division.
	residences;the lamp enclosures and poles shall be painted to reduce reflection;			
	 light sources shall be installed with glare shields, hoods, and/or filtering louvers sufficient to prohibit spillage of light onto adjacent residential properties. 			
Air Quality				
Construction-related air quality impacts: emissions of architectural coatings during construction.	MMIII-1. Architectural coating activities, such as painting, stucco application, etc., shall be limited to coating a maximum of 4,000 square feet of surface per day.	During construction.	Specify in bid requests, contractors specifications, and grading plans; site inspections shall verify implementation.	Community Development Department— Building Division and Code Enforcement Division; general contractor.

Table 7-1. Continued Page 2 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
Construction-related air quality impacts: site grading and paving would result in NO _X emissions above the South Coast Air Quality Management District significance thresholds.	 MMIII-2. The project applicant shall implement the following NO_X-reducing practices during all construction activities: use aqueous diesel fuel in all off-road diesel equipment and use cool exhaust gas recirculation equipment. 	During construction.	Specify in bid requests, contractors specifications, and grading plans; site inspections shall verify implementation.	Community Development Department— Building Division and Code Enforcement Division; general contractor.
Cumulative-level impacts from construction related emissions.	Implementation of Mitigation Measure MMIII-1.	See above.	See above.	See above.
Cultural Resources				
Impacts to unknown archaeological resources.	MMV-1. During construction, if buried cultural resources, such as chipped or ground stone, historical artifacts, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, the contractor shall ensure that all work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the City. If human remains of Native American origin are discovered during proposed project construction, compliance with state laws, which fall within the jurisdiction of the Native American Heritage Commission (Public Resource Code Sec. 5097), relating to the disposition of Native American burials will be adhered to. If any human remains are discovered or recognized in any location other than a dedicated cemetery, the contractor shall ensure that excavation or disturbance of the site (including any nearby area reasonably suspected to overlie adjacent human remains) shall stop until:	During earthmoving/ grading activities and construction.	Construction Contractor shall halt construction. If possible resources are uncovered, a qualified archaeologist shall make the determination as to whether further action is required.	Community Development Department— Building Division and Engineering Division; construction contractor.

Table 7-1. Continued Page 3 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
	a. the coroner of the county has been informed and has determined that no investigation of the cause of death is required; and			
	b. if the remains are of Native American origin,			
	1. The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or			
	 The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission. 			
	According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission.			
Inadvertent discovery of unknown human remains.	Implementation of Mitigation Measure MMV-1.	See above.	See above.	See above.

Table 7-1. Continued Page 4 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
Geology and Soils				
Impacts from seismic-related ground failure.	MMVI-1. During plan check, the applicant shall submit a geologic report to the City of Westminster Building Department to identify site conditions and potential seismic geologic hazards risk and recommend measures to reduce potential safety impacts. The project design and development shall incorporate all recommended measures outlined in the geologic report to ensure that safety is not compromised (General Plan Policies VA1-2 and VA1-3).	During plan check; prior to construction.	Geologic Report shall be approved by the City Engineer.	City Building Department, City Engineer, and project applicant.
	MMVI-2. All grading and construction plans shall clearly indicate required mitigation measures. (General Plan Policy VA1-4)	Prior to obtaining a grading permit.	Grading and construction plans shall be approved by the City Engineer.	City Building Department, City Engineer, and project applicant.
	MMVI-3. The geologic report submitted in support of the grading permit and building permit applications shall include a liquefaction study. Three copies of the report shall be submitted. Additional measures may be required for structural design and waterproofing of foundations and below grade construction. The geologic report shall be prepared by a California registered geotechnical engineer and shall provide criteria for design of foundations and underground walls and slabs, including waterproofing. The report shall be prepared according to <i>Guidelines for Evaluation and Mitigating Seismic Hazards in California, Chapter 6 – Analysis and Mitigation of Liquefaction Hazards</i> (California Division of Mines and Geology 1997) and shall include results from a detailed field investigation, a geotechnical field investigation, and geotechnical laboratory testing.	Prior to obtaining a grading permit.	Grading and construction plans shall be approved by the City Engineer.	City Building Department, City Engineer, and project applicant.
	This mitigation measure assumes that the geologic/soils report will conclude that the liquefaction hazard at the site can be mitigated to an acceptable factor of safety for liquefaction resistance through the implementation of methods to prevent structural damage from liquefaction. Such methods may include one or more of the following:			
	 excavation and removal or recompaction of potentially liquefiable materials; 			
	• in-situ (i.e., in place) ground densification (e.g., compaction			

Table 7-1. Continued Page 5 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
	 with vibratory probes, compaction grouting); other types of ground improvement (e.g., permeation grouting, deep drains, structural fills, dewatering); deep foundations (e.g., piles, piers); reinforced shallow foundations (e.g., grade beams, rigid raft foundations); and design of structures to withstand predicted ground softening and 			
Impacts from soil erosion.	 vertical and lateral ground displacement. MMVI-4. Prior to obtaining a grading permit, the applicant shall prepare and submit an erosion control plan to the City of Westminster Engineering Department to reduce erosion of on- and offsite soils. This shall include, but not be limited to, the following measures. The contractor shall water the site at least twice daily to reduce potential wind erosion and fugitive dust impacts. 	Prior to obtaining a grading permit.	Erosion control plan shall be approved by City Engineer prior to grading activities and implemented by the construction contractor.	City Building Department, City Engineer, and project applicant.
	 The contractor shall be responsible for implementing wheel washing for the construction vehicles and equipment leaving the site to reduce deposition soil into the public right-of-way. During construction, the contractor shall implement street sweeping in the vicinity of the project at least once per week, or as deemed necessary by the City's Building and Engineering Departments. During construction, the contractor shall implement the BMPs, 			
Impacts from unstable soils.	as identified in the erosion control plan and Storm Water Pollution Prevention Plan (SWPPP). Implementation of Mitigation Measures MMVI-1, MMVI-2, and MMVI-3.	See above.	See above.	See above.

Table 7-1. Continued Page 6 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
Hydrology and Wate	er Quality			
Violate any water quality standards or waste discharge requirements	Implementation of Mitigation Measure MMVI-4.	See above.	See above.	See above.
	MMVIII-1. Prior to issuance of any grading permits, the applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP) and provide proof that a Notice of Intent (NOI) to file a National Pollution Discharge Elimination System Permit (NPDES) was filed with the RWQCB. This evidence shall consist of a copy of the NOI stamped by the RWQCB.	Prior to issuance of rough grading permits.	Water Quality Management Plan shall be submitted to and approved by the City Engineer; inspections during construction shall verify implementation.	City Building Department, City Engineer, and project applicant.
	MMVIII-2: Prior to the issuance of any grading permit, a Water Quality Management Plan (WQMP) for the final detailed project designs shall be submitted by the applicant to be approved by the city engineer. The WQMP shall identify a program for the implementation of specific structural and non-structural BMPs to address water quality issues associated with the final detailed project design construction and development and so that predictable run-off is controlled.	See above.	See above.	See above.
	MMVIII-3: Controls on operational dewatering shall be implemented during excavation and construction phases. Wastewater generated as a part of dewatering shall be discharged to the sanitary sewer for treatment at a wastewater treatment plant if possible. If discharge to surface waters is unavoidable, before engaging in dewatering activities, the applicant will obtain an individual NPDES permit from the Santa Ana RWQCB for these discharges. This permit will contain provisions that will require that discharges do not significantly degrade surface water quality, and will require a monitoring program to ensure that permit conditions are met. Water discharged into surface water facilities will be required to meet the total maximum daily load (TMDL) and NPDES limits set in Orange County's water quality permit. Erosion or Siltation Impacts	Prior to issuance of rough grading permits.	Obtain an individual NPDES permit from the Santa Ana RWQCB. Water Quality Management Plan shall be submitted to and approved by the City Engineer; inspections during construction shall verify implementation.	City Building Department, City Engineer, and project applicant.

Table 7-1. Continued Page 7 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
Impacts from soil erosion	Implementation of Mitigation Measure MMVI-3	See above.	See above.	See above.
Contribution to polluted runoff.	Implement Mitigation Measure MMVI-4, MMVIII-1, MMVIII-2, and MMVIII-3.	See above.	See above.	See above.
Noise				
Noise impacts from construction activities	MMXI-1. Construction activities shall only occur between the hours of 7:00 a.m. and 8:00 p.m., Monday through Saturday. This measure shall be made a condition of the construction contract.	During construction phases.	Requirements for noise-reducing techniques shall be stipulated in any contractor bids and implemented by the Construction Contractor; field inspections shall be conducted to verify compliance.	Community Development Department— Building Division and Code Enforcement Division; construction contractor
	 MMXI-2. Prior to and during construction, the applicant shall comply with the City of Westminster General Plan Policies VB2-1 and VB2-2 regarding stationary noise sources. To comply with City Policies VB2-1 and VB2-2, an acoustical study and construction mitigation plan shall be implemented, including, but not limited to, the following: Locate all equipment (including stationary noise-generating equipment such as pumps and generators), water tanks, and equipment storage, staging, and warm-up areas as far as possible from nearby residences. Where possible, noise-generating equipment shall be shielded from the residences by noise-blocking buffers such as structures or haul truck trailers. Stationary noise sources located less than 300 feet from noise-sensitive receptors shall be equipped with noise-reducing engine housings. Portable acoustic barriers shall be placed around noise-generating equipment located within 200 feet of residences. All construction equipment powered by gasoline or diesel 	Prior to and during construction.	Requirements for noise-reducing techniques shall be stipulated in any contractor bids and implemented by the Construction Contractor; field inspections shall be conducted to verify compliance.	Community Development Department— Building Division; construction contractor.
	 All construction equipment powered by gasoline or diesel engines shall have sound-control devices at least as effective as 			

Table 7-1. Continued Page 8 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
•	those originally provided by the manufacturer. All equipment shall be operated and maintained to minimize noise generation. No equipment shall be permitted to have an unmuffled exhaust.	8	•	
•	Shield/shroud any impact tools used during construction.			
•	Shut off mobile noise-generating equipment and machinery when not in use.			
•	When possible, construction vehicles accessing the site shall use the shortest route to and from local freeways, provided the routes do not cause nuisance noise to receptors along the route.			
•	Project applicant shall disseminate essential information to residences and implement a complaint response/tracking program. Prior to the issuance of a building permit, the project applicant shall notify residences within 500 feet of the construction area of the construction schedule for the proposed project. The notice shall be sent via certified mail to residents. The project applicant shall submit a radius map, list of residents, and copy of the notice to the City planning department. The project applicant and the construction contractor shall be designated as noise disturbance coordinators and shall be responsible for responding to complaints regarding construction noise. The coordinators shall determine the cause of the complaint and shall ensure that reasonable measures are implemented to correct the problem. A contact telephone number for the noise disturbance coordinator shall be conspicuously posted on construction site fences and shall be included in the written notification of the construction schedule			

sent to residents.

Table 7-1. Continued Page 9 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
	MMXI-3. Implementation of additional mitigation measures, as needed and/or required. Throughout the construction period, the contractor shall implement additional noise mitigation measures at the request of the city or county. Additional measures may include changing the location of stationary noise-generating equipment, shutting off idling equipment, rescheduling construction activity, installing acoustic barriers around stationary sources of construction noise, using alternative equipment or construction methods that produce less noise, and other site-specific measures, as appropriate.	During construction phases.	Requirements for noise- reducing techniques shall be stipulated in any contractor bids and implemented by the Construction Contractor; field inspections shall be conducted to verify compliance.	Community Development Department— Building Division and Code Enforcement Division; construction contractor.
Impacts to future residents	MMXI-4. The project applicant shall retain a qualified acoustical consultant to design treatments for the residential units such that interior noise levels comply with the requirements of Article 4 of the California Administrative Code (California Noise Insulation Standards, Title 25, Chapter 1) so that interior noise levels do not exceed 45 Ldn. The design shall meet the City interior noise standard of 55 dBA between the hours 7:00 a.m. and 10:00 p.m. and 45 dBA between the hour of 10:00 p.m. and 7:00 a.m. Treatments may include but are not limited to installing acoustically rated windows and avoiding sound transmission paths through vents or other openings in the building shell. If it is required that windows be closed, forced fresh air ventilation shall be required.	During final project design; prior to issuance of building permit.	Project acoustical design plans shall be approved by building official prior to any construction.	Project applicant; Community Development Department— Building Division.
	MMXI-5. The project applicant's acoustical consultant shall prepare a report detailing the acoustical treatments to be applied to the building for compliance with the interior noise standards. The report shall be reviewed and approved by the City prior to issuance of the building permit.	During final project design.	Project acoustical design plans shall be approved by building official prior to any construction.	Project applicant; Community Development Department— Building Division.
Groundborne vibration or noise	MMXI-6: If pile driving is required, the project applicant shall retain a qualified vibration consultant to identify pile driving equipment and methods necessary to limit ground vibration from pile driving to 0.20 inches per second at the nearest structures. Use of a vibratory driver rather than an impact driver or limiting the minimum distance between impact drivers and structures are methods than can be used to limit vibration.	During final project design.	Project acoustical design plans shall be approved by building official prior to any construction.	Project applicant; Community Development Department— Building Division.

Table 7-1. Continued Page 10 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
Impacts during construction from temporary increase in ambient noise levels.	action from rary increase in		See above.	See above.
Public Services				
Park fee requirement.	MMXIII-1. Prior to the issuance of a building permit, project applicant shall pay in-lieu park fees beyond those credited for dedication for the provision of parks.	Prior to issuance of building permit.	Payment of fee.	Project applicant; City Department of Public Works; Community Development Department—Park and Recreation Department.
Transportation and T	Traffic Traffic			
Transportation design hazards: parking access ramps may be too short.	MMXV-1: To accommodate a storage length of one vehicle, project designs shall place the gated entry into the retail parking area a minimum of 20 feet beyond the west edge of the sidewalk. Project designs shall be approved by City traffic engineers and followed during construction of the project.	During final design phase and construction.	Design approval and inspection during construction by the City Engineer; scheduled inspections during operation of the project.	Project applicant; City Department of Public Works; Community Development Department— Planning Division and Engineering Division
Obscured views for exiting vehicles.			Periodic inspections during and after construction by the City Engineer; scheduled inspections during operation of the project.	Project Applicant; City Department of Public Works; Community Development Department— Planning Division and Engineering Division

Table 7-1. Continued Page 11 of 11

Impact	Mitigation Measure	Monitoring Phase	Implementation Method	Monitoring Agency
Potential for traffic and pedestrian accidents.	MMXV-3. Project applicant shall install a sidewalk along the property frontage on Bishop Place and Moran Street prior to certificate of occupancy.	Prior to occupancy.	Periodic inspections during and after construction by the City Engineer; scheduled inspections during operation of the project.	Project applicant; City Department of Public Works; Community Development Department— Planning Division and Engineering Division
	MMXV-4. Prior to issuance of a certificate of occupancy, the project applicant shall install a crosswalk at the intersection of Bishop and Moran Streets connecting the east and west sides of Moran Street. Crosswalk shall comply with City of Westminster standards.	Prior to the issuance of certificate of occupancy.	Install crosswalk; verification of installation by City Building Department.	Project applicant; City Department of Public Works.
	 MMXV-5. Prior to issuance of a certificate of occupancy, Project applicant shall install two types of street signs: "For your safety, please cross the street at the crosswalk" or similar standard city approved sign shall be placed in a location prominently visible from all pedestrian access routes to the lower level garage "Pedestrian crossing" or similar standard city approved sign shall be placed and visible from east and west bound drivers on Bishop Place and south bound drivers on Moran Street. Each of the pedestrian safety signs shall also include a directional arrow and "Asian Garden Mall" to direct pedestrians to the safest walking route to the mall. 	Prior to the issuance of certificate of occupancy.	Install pedestrian safety signs; verification of installation by City Building Department.	Project applicant; City Department of Public Works.

Appendix A Revised Air Quality Study

Revised Air Quality Study

Introduction

The project site is within the South Coast Air Basin (SCAB). Air quality conditions in SCAB are regulated by the South Coast Air Quality Management District (SCAQMD). The SCAB region has been in nonattainment for several air pollutants, including carbon monoxide (CO), airborne particulate matter with an aerodynamic diameter of less than 10 microns (PM_{10}), and ozone (O_3), and is working toward improving air quality within the region.

Regional Climate and Meteorology

The distinctive climate of SCAB is determined by its terrain and geographic location, which includes a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. The general region is in the semipermanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds (warm west winds blowing from east of Los Angeles).

Many of the same factors that make living in Southern California desirable also contribute to the worst smog problem in the nation. Gentle ocean breezes carry pollutants into the inland valleys, where they are trapped by the surrounding mountains. Thermal inversions act like a lid over the basin. Bright sunshine and warm temperatures cause some pollutants to react with each other, forming even more pollution. These natural conditions, along with pollution from more than 9 million motor vehicles, thousands of businesses and industries, and countless consumer products, create ideal conditions for smog.

Air Quality Standards

Air quality is determined primarily by the type and amount of contaminants emitted into the atmosphere, the size and topography of the basin, and its

meteorological conditions. SCAB has low mixing heights and light winds that are conducive to the accumulation of air pollutants.

Air quality is measured by comparing contaminant levels in ambient air samples to national and state standards. These standards are set by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board at levels determined to be protective of public health and welfare with an adequate margin of safety. National ambient air quality standards were first authorized by the federal Clean Air Act of 1970. California ambient air quality standards were authorized by the state legislature in 1967. The California Ambient Air Quality Standards (CAAQS) describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. National Ambient Air Quality Standards (NAAQS) describe acceptable conditions. Air quality is considered in "attainment" if pollutant levels are continuously below or equal to the standards and exceed them no more than once each year. California standards are generally more stringent than the national standards.

Air quality standards specify the upper limits of concentrations and duration in the ambient air consistent with the management goal of preventing specific harmful effects. There are national and state standards for O₃, CO, nitrogen dioxide (NO₂), PM₁₀, sulfur dioxide (SO₂), and lead (Pb). These contaminants are called "criteria pollutants." SCAQMD also conducts monitoring for two other state standards: sulfate and visibility. In addition, California has set standards for hydrogen sulfide and vinyl chloride, but these are not measured at any SCAQMD monitoring stations because they are not considered to be a problem in SCAB.

Existing Air Quality Conditions

The state of California has designated SCAQMD as being in extreme nonattainment for O_3 and in nonattainment for PM_{10} and CO (although Orange County is in attainment for CO). EPA designated SCAQMD as being in extreme nonattainment for O_3 and in serious nonattainment for PM_{10} and CO. The existing air quality conditions in the proposed project area can be characterized by monitoring data collected in the region. The closest monitoring station is located at the Costa Mesa and Anaheim Harbor Boulevard Monitoring Station. Air quality monitoring data for the last 3 years are presented in Table 1.

Table 1. Ambient Air Quality Monitoring Data from the Costa Mesa and Anaheim Harbor Blvd Monitoring Station

Pollutant Standards		2000	2001	2002
Ozone (O ₃) (Costa Mesa)				
	Maximum 1-hour concentration (ppm)	0.102	0.098	0.087
Number of Days Standard Exce	eeded			
	CAAQS 1-hour (>0.09 ppm)	1	1	0
	NAAQS 1-hour (>0.12 ppm)	1	1	0
Carbon Monoxide (CO) (Cos	ta Mesa)			
	Maximum 8-hour concentration (ppm)	6.3	4.6	4.3
	Maximum 1-hour concentration (ppm)	7.8	6.2	5.1
Number of Days Standard Exce	eeded			
	CAAQS 8-hour (≥9.0 ppm)	0	0	0
	NAAQS 8-hour (≥9.0 ppm)	0	0	0
	CAAQS 1-hour (\geq 20 ppm)	0	0	0
	NAAQS 1-hour (≥35 ppm)	0	0	0
Particulate Matter (PM ₁₀) (A	naheim)			
	Maximum 24-hour concentration (μg/m³)	126	93	69
	Second highest 24-hour concentration (µg/m³)	119	66	64
	Average geometric mean concentration (µg/m³)	35	33	31
	Average arithmetic mean concentration ($\mu g/m^3$)	39	28	33
Number of Days Standard Exce	eeded ^a			
	CAAQS 24-hour (>50 μg/m ³)	33	53	30
	NAAQS 24-hour (>150 μg/m ³)	0	0	0
^a Calculated exceedances based	d on measurements taken every 6 days.			
Notes: CAAQS = California	Ambient Air Quality Standards.			

NAAQS = National Ambient Air Quality Standards.

Sources: California Air Resources Board 2003 and U.S. Environmental Protection Agency 2003.

Table 1 indicates that O₃ concentrations occasionally exceeded state and federal standards in 2000 and 2001, while PM₁₀ often exceeded state standards during this period. O₃ is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections, and can cause substantial damage to vegetation and other materials. O_3 is a severe eye, nose, and throat irritant, and attacks synthetic rubber, textiles, plants, and other materials. O₃ causes extensive damage to plants by leaf discoloration and cell damage. It is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. O₃ precursors, which

include reactive organic gases (ROG) and oxides of nitrogen (NOx), react in the atmosphere in the presence of sunlight to form O_3 . Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, O_3 is primarily a summer air pollution problem. ROG and NOx are emitted by mobile sources and stationary combustion equipment.

 PM_{10} results from many kinds of dust- and fume-producing activities, such as demolition, construction, and vehicular traffic. PM_{10} comprises particles that can be inhaled deeply into the lungs. Extended exposure to PM_{10} can increase the risk of chronic respiratory disease. Entrained road dust from motor vehicles accounts for approximately two-thirds of the regional inventory of PM_{10} .

Data also indicate that CO concentrations do not approach the state standards; however, CO concentrations in the vicinity of congested intersections and freeways would be expected to be higher than those recorded at the monitoring station. CO concentrations are expected to continue to decline in SCAB because of existing controls and programs and the continued retirement of older, more polluting vehicles.

Sensitive Receptors

Sensitive land uses are generally defined as locations where people reside or where the presence of air emissions could adversely affect the use of the land. Typical sensitive receptors include residents, school children, hospital patients, and the elderly. Sensitive land uses in the project area that could be affected by the project include the Bolsa Verde Estates Mobile Home Park to the east and single-family residential to the south, along Coronet Avenue.

Projected Air Quality Violation

Project-related air emissions would have a significant effect if they resulted in concentrations that create either a violation of an ambient air quality standard or contribute to an existing air quality violation. SCAQMD established significance thresholds to assess the impact on regional air quality. Table 2 presents the allowable contaminant generation rates at which construction and operational emissions are considered to have a significant effect on air quality throughout SCAB.

Table 2. Allowable Regional Emission Limits

Air Pollutant	Construction (pounds/day)	Operation (pounds/day)
Reactive organic gases	75	55
Carbon monoxide	550	550
Nitrogen oxides	100	55
Sulfur oxides	150	150
Particulates (PM ₁₀)	150	150
Source: SCAQMD 1993.		

Construction Impacts

Construction activities for the proposed project would result in short-term impacts on ambient air quality in the area. Temporary construction emissions would result directly from site clearance, grading, site preparation activities, and building erection, and indirectly from construction equipment emissions and construction worker commuting patterns. Pollutant emissions would vary daily depending on the level of activity, the specific operations, and the prevailing weather.

Diesel Health Risk

Conversation with SCAQMD staff indicates that SCAQMD does not consider diesel-related cancer risks from construction equipment to be an issue due to the short-term nature of construction activities (Blankson pers. comm.). It is anticipated that construction activities would continue for approximately 525 days. The assessment of cancer risk is typically based on a 70-year exposure period. Construction activities are sporadic, transitory, and short term in nature, and once construction activities have ceased, so too have emissions from construction activities. Because exposure to diesel exhaust will be well below the 70-year exposure period, construction of the proposed project is not anticipated to result in an elevated cancer risk to exposed persons. In addition, Table 4 indicates that PM₁₀ from diesel emissions are relatively low and well below the SCAQMD's thresholds of 150 pounds per day. Consequently, the estimation of diesel risks associated with construction activities is considered to be less than significant.

Pollutant Emissions

A detailed inventory of construction equipment that will be used for the proposed project was not available; therefore, this analysis is based on anticipated construction equipment that may be used during construction activities, as shown in Table 3.

Table 3. Anticipated Construction Equipment

Construction Phase and Equipment	Number of Equipment Pieces
Site grading	
Rubber-tired dozers	1
Tractor/loaders/backhoes	1
Building construction	
Concrete/industrial saw	4
Other equipment	6
Rough terrain forklift	4

Table 4 summarizes maximum project construction emissions. Construction activities were divided into separate phases and analyzed separately. Consequently, project significance is not a comparison of the sum of all construction phases to SCAQMD threshold levels. Instead, if one phase of construction is found to have a significant impact, then the entire project is considered to have a significant air quality impact. Emissions estimates were calculated using the URBEMIS2002 emissions model, Version 7.4.2, and are shown in Table 4.

Table 4. Maximum Emissions from Construction Activities (Unmitigated)

Construction	ROG (lbs./day)	NO _X (lbs./day)	CO (lbs./day)	PM10 (lbs./day)
Proposed project				
Site grading	4.34	36.12	30.12	6.68
Building construction	24.47	160.22	147.15	7.40
Arch. coating	382.36	_	_	_
Asphalt off-gas	0.06	_	_	_
Threshold	75	100	550	150

As indicated in Table 4, emissions from architectural coating for the proposed project are anticipated to exceed SCAQMD's ROG threshold of 75 pounds per day, and emissions from building construction are anticipated to exceed the NOx threshold of 100 pounds per day. As a result, this impact is considered significant. Implementation of Mitigation Measure MM AQ-2 will reduce this impact to a less-than-significant level.

The URBEMIS2002 calculation assumes an ROG emission rate of 0.0185 pounds of ROG per square foot. Multiplying the emission rate of 0.0185 by 4000 square feet results in 74 pounds per day of ROG emissions, which is below the SCAQMD ROG emission threshold of 75 pounds per day. Table 5 shows the architectural coating mitigated maximum emissions and NOx mitigated maximum emissions.

Table 5. Maximum Emissions from Construction Activities (Mitigated)

Construction	ROG (lbs./day)) NO _x (lbs./day)	CO (lbs./day)	PM10 (lbs./day)
Proposed project	t			
Building	-	82.80	-	-
Construction	l			
Arch. coating	74	_	_	_
Threshold	75	100	550	150

Consequently, architectural coating emissions and NOx would exceed SCAQMD thresholds. Implementation of the mitigation measures MM AQ-1 and MM AQ-2 would reduce emissions to levels below district thresholds.

Mitigation Measures

MM AQ-1. Architectural Coating Limitation

Architectural coating activities shall be limited to coating a maximum of 4,000 square feet of surface per day.

MM AQ-2 NO_x Emission Reduction

The project proponent shall implement the following NO_x-reducing construction practices during construction of the proposed project:

use aqueous diesel fuel in all off-road diesel equipment, and use cool exhaust gas recirculation.

Operational Impacts

Long-term air quality impacts are those associated with the change in permanent use of the project site. Two types of air pollutant sources must be considered with respect to the proposed project: area and mobile sources. Area sources include emissions from onsite activities and natural gas combustion for heating requirements. Mobile source emissions result from vehicle trips, including employees, deliveries, and maintenance activities.

Area Source Emissions

In addition, area source emissions were calculated based on land use characteristics. Area source emissions result from fuel and personal product use. Electricity and natural gas are utilized by almost every commercial and residential development. Table 6 summarizes project operational emissions.

Mobile Source Emissions

The proposed project would generate motor-vehicle trips that would in turn generate operational air emissions. Emission calculations for with-project conditions are based on the daily trip generation data provided by the project traffic engineers, Linscott Law & Greenspan Engineers (LLG).

The majority of project-related emissions are associated with mobile source activities. Mobile source emissions result from operational vehicle trips, including employees, deliveries and maintenance activities, and onsite parking. Under worst-case design-year with project conditions, the proposed project is estimated to generate approximately 1,543 trips per day (LLG 2004). The emissions associated with the long-term operation of the project are shown in Table 6.

Table 6. Operational Stationary and Mobile Source Air Emissions during Project Operation (lbs./day)

Operational Phase	ROG (lbs./day)	NO _X (lbs./day)	CO (lbs./day)	PM10 (lbs./day)
Proposed project				
Area source emissions				
Natural gas	0.10	1.32	0.55	0.0
Landscaping	0.25	0.02	1.96	0.0
Consumer products	3.91	0.0	0.0	0.0
Vehicular emissions	13.04	12.80	138.13	10.10
Total	17.3	14.14	140.64	10.1
Threshold	75	100	550	150

As indicated in Table 6, project-related operational emissions would not exceed the SCAQMD significance thresholds for criteria pollutants. Therefore, no impact is anticipated to result from project operations.

Cumulatively Considerable Net Increase in Pollutants

Unmitigated construction activities would generate emissions above threshold levels. Consequently, mitigation is required to reduce architectural coating below SCAQMD thresholds. Implementation of mitigation measure MM AQ-1 would reduce cumulatively considerable net increases of any criteria pollutants to levels below SCAQMD thresholds. Therefore, this cumulative impact is less than significant.

Exposure of Sensitive Receptor Pollutants

The SCAQMD guidelines have two criteria for CO modeling. The first criterion is comparing future no project to future with project level of service (LOS). If the LOS level from the future with project condition is one level worse than the future with no project LOS, then CO modeling is required. The proposed project showed no drop in LOS levels. The second criterion is if the project is obviously at LOS D or worse with an increase of 2% or greater volume to capacity (V/C) ratio, the project requires CO modeling. However, the project did have LOS levels of D and F but there was no 2% or greater increase comparing future no project to future with project. The project failed to meet either criterion; therefore, no intersections for the proposed project required any modeling. As a result, this impact is considered less than significant. (Koizumi pers. comm.)

Creation of Objectionable Odors

The proposed project and alternatives are not anticipated to generate any objectionable odors affecting a substantial number of people. Consequently, this impact is considered less than significant.

References

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- Linscott Law and Greenspan Engineers (LLG). 2004. Traffic Impact Analysis for the Westminster Senior Housing Project in the City of Westminster. Westminster, CA.
- South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook. Office of Planning and Technology Advancement. Diamond Bar, CA: South Coast Air Quality Management District.
- U.S. Environmental Protection Agency. 2003. Air Data. Last Revised: July 2, 2003. Available: http://www.epa.gov/air/data/reports.html, 2003>. Accessed: February 2, 2004.

Personal Communications

Blankson, Charles. South Coast Air Quality Management District, Diamond Bar, CA. August 8, 2003–telephone conversation.

Koizumi, James. Air Quality Specialist, South Coast Air Quality Management District. January 9, 2004.

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APPENDIX URBEMIS 2002 FILE

URBEMIS 2002 For Windows 7.5.0

File Name: G:\Air-Nois\Air\Westminster Bishop-Moran Senior

Housing\(REVISED) Westminster Urbemis File.urb
Project Name: Westminster

Project Location: South Coast Air Basin (Los Angeles area)

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

PM10 PM10					PMIU		
*** 2005 ***	ROG	NOx	CO	S02	TOTAL		
EXHAUST DUST	1100	1.011		202	101111		
TOTALS (lbs/day,unmitigated)							
382.36 160.22	147.15	0.00	12.33	7.33	5.00		
TOTALS (lbs/day, mitigated)							
382.36 82.80	34.35	0.00	6.06	1.06	5.00		
AREA SOURCE EMISSION ESTIMATES							
	ROG	NOx	CO	SO2	PM10		
TOTALS (lbs/day,unmitigated)	4.26	1.34	2.51	0.03	0.01		
OPERATIONAL (VEHICLE) EMISSION							
	ROG	NOx	CO	SO2	PM10		
TOTALS (lbs/day,unmitigated)	13.04	12.80	138.13	0.11	10.10		
SUM OF AREA AND OPERATIONAL EMI							
	ROG	NOx	CO	S02	PM10		
TOTALS (lbs/day,unmitigated)	17.30	14.14	140.64	0.14	10.11		

URBEMIS 2002 For Windows 7.5.0

File Name: G:\Air-Nois\Air\Westminster Bishop-Moran Senior

Housing\(REVISED) Westminster Urbemis File.urb
Project Name: Westminster

Project Location: South Coast Air Basin (Los Angeles area)

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Pounds/Day - Summer)

Construction Start Month and Year: January, 2005

Construction Duration: 9

Total Land Use Area to be Developed: 2.2 acres Maximum Acreage Disturbed Per Day: 0.5 acres

Single Family Units: 80 Multi-Family Units: 0

Retail/Office/Institutional/Industrial Square Footage: 32700

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

PM10 Source ROG NOX CO SO2 TOTAL							PM10	
EXHAUST DUST *** 2005*** Phase 1 - Demolition Emissions Fugitive Dust			500		~~	200		
Phase 1 - Demolition Emissions Fugitive Dust			ROG	NOx	CO	SO2	TOTAL	
Phase I - Demolition Emissions Fugitive Dust								
Fugitive Dust 0.00		on Emigai	an a					
Off-Road Diesel 0.00 0.00 0.00 - 0.00			JIIS			0 00		0 00
On-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	5		0 00	0 00			0 00	
Worker Trips 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.								
Maximum lbs/day 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.								
Phase 2 - Site Grading Emissions Fugitive Dust	-							
Fugitive Dust 5.00 Off-Road Diesel 4.31 36.05 29.50 - 1.68 1.68 0.00 On-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Maximum 105/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road Diesel 4.31 36.05 29.50 - 1.68 1.68 0.00 On-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Worker Trips 0.03 0.07 0.62 0.00 0.00 0.00 0.00 Maximum lbs/day 4.34 36.12 30.12 0.00 6.68 1.68 5.00 Phase 3 - Building Construction Bldg Const Off-Road Diesel 19.92 159.97 141.67 - 7.33 7.33 0.00 Bldg Const Worker Trips 0.46 0.26 5.47 0.00 0.07 0.00 0.07 Arch Coatings Off-Gas 381.94 Arch Coatings Worker Trips 0.42 0.20 5.17 0.00 0.07 0.00 0.07 Asphalt Off-Road Diesel 4.00 25.08 33.99 - 1.05 1.05 0.00 Asphalt On-Road Diesel 0.01 0.23 0.05 0.00 0.01 0.01 0.00 Asphalt Worker Trips 0.02 0.01 0.30 0.00 0.00 7.40 7.33 0.07 Max lbs/day all phases	Phase 2 - Site Gra	ding Emiss	sions					
On-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Fugitive Dust	-	-	-	-	5.00	-	5.00
Worker Trips 0.03 0.07 0.62 0.00 0.00 0.00 0.00 0.00 Maximum lbs/day 4.34 36.12 30.12 0.00 6.68 1.68 5.00 Phase 3 - Building Construction Bldg Const Off-Road Diesel 19.92 159.97 141.67 - 7.33 7.33 0.00 Bldg Const Worker Trips 0.46 0.26 5.47 0.00 0.07 0.00 0.07 Arch Coatings Off-Gas 381.94	Off-Road Diesel	4.31	36.05	29.50	_	1.68	1.68	0.00
Maximum lbs/day 4.34 36.12 30.12 0.00 6.68 1.68 5.00 Phase 3 - Building Construction Bldg Const Off-Road Diesel 19.92 159.97 141.67 - 7.33 7.33 0.00 Bldg Const Worker Trips 0.46 0.26 5.47 0.00 0.07 0.00 0.07 Arch Coatings Off-Gas 381.94 Arch Coatings Worker Trips 0.42 0.20 5.17 0.00 0.07 0.00 0.07 Asphalt Off-Gas 0.06	On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction Bldg Const Off-Road Diesel	Worker Trips	0.03	0.07	0.62			0.00	0.00
Bldg Const Off-Road Diesel 19.92 159.97 141.67 - 7.33 7.33 0.00 Bldg Const Worker Trips 0.46 0.26 5.47 0.00 0.07 0.00 0.07 Arch Coatings Off-Gas 381.94	Maximum lbs/day	4.34	36.12	30.12	0.00	6.68	1.68	5.00
Bldg Const Off-Road Diesel 19.92 159.97 141.67 - 7.33 7.33 0.00 Bldg Const Worker Trips 0.46 0.26 5.47 0.00 0.07 0.00 0.07 Arch Coatings Off-Gas 381.94	Phage 3 - Building	Construct	tion					
Bldg Const Worker Trips 0.46 0.26 5.47 0.00 0.07 0.00 0.07 Arch Coatings Off-Gas 381.94			21011					
Bldg Const Worker Trips	_		159.97	141.67	_	7.33	7.33	0.00
0.46 0.26 5.47 0.00 0.07 0.00 0.07 Arch Coatings Off-Gas						,,,,,	, , 55	0.00
Arch Coatings Worker Trips 0.42 0.20 5.17 0.00 0.07 0.00 0.07 Asphalt Off-Gas 0.06 Asphalt Off-Road Diesel 4.00 25.08 33.99 - 1.05 1.05 0.00 Asphalt On-Road Diesel 0.01 0.23 0.05 0.00 0.01 0.01 0.00 Asphalt Worker Trips 0.02 0.01 0.30 0.00 0.00 0.00 0.00 Maximum lbs/day382.36 160.22 147.15 0.00 7.40 7.33 0.07	_	_	0.26	5.47	0.00	0.07	0.00	0.07
Arch Coatings Worker Trips 0.42 0.20 5.17 0.00 0.07 0.00 0.07 Asphalt Off-Gas 0.06	Arch Coatings Off-	Gas						
0.42 0.20 5.17 0.00 0.07 0.00 0.07 Asphalt Off-Gas 0.06 - </td <td></td> <td>381.94</td> <td>_</td> <td>_</td> <td>_</td> <td>_</td> <td>_</td> <td>_</td>		381.94	_	_	_	_	_	_
Asphalt Off-Gas 0.06	Arch Coatings Work	er Trips						
Asphalt Off-Road Diesel 4.00 25.08 33.99 - 1.05 1.05 0.00 Asphalt On-Road Diesel 0.01 0.23 0.05 0.00 0.01 0.01 0.00 Asphalt Worker Trips 0.02 0.01 0.30 0.00 0.00 0.00 0.00 Maximum lbs/day382.36 160.22 147.15 0.00 7.40 7.33 0.07 Max lbs/day all phases		0.42	0.20	5.17	0.00	0.07	0.00	0.07
Asphalt On-Road Diesel 0.01 0.23 0.05 0.00 0.01 0.01 0.00 Asphalt Worker Trips 0.02 0.01 0.30 0.00 0.00 0.00 0.00 Maximum lbs/day382.36 160.22 147.15 0.00 7.40 7.33 0.07 Max lbs/day all phases	Asphalt Off-Gas	0.06	_	_	_	_	_	-
Asphalt On-Road Diesel	Asphalt Off-Road D	iesel						
0.01 0.23 0.05 0.00 0.01 0.01 0.00 Asphalt Worker Trips 0.02 0.01 0.30 0.00 0.00 0.00 0.00 Maximum lbs/day382.36 160.22 147.15 0.00 7.40 7.33 0.07 Max lbs/day all phases			25.08	33.99	-	1.05	1.05	0.00
Asphalt Worker Trips 0.02 0.01 0.30 0.00 0.00 0.00 0.00 Maximum lbs/day382.36 160.22 147.15 0.00 7.40 7.33 0.07 Max lbs/day all phases	Asphalt On-Road Di	esel						
0.02 0.01 0.30 0.00 0.00 0.00 0.00 0.00 Maximum lbs/day382.36 160.22 147.15 0.00 7.40 7.33 0.07 Max lbs/day all phases			0.23	0.05	0.00	0.01	0.01	0.00
Maximum lbs/day382.36 160.22 147.15 0.00 7.40 7.33 0.07 Max lbs/day all phases		_						
Max lbs/day all phases								
	Maximum lbs/day3	82.36	160.22	147.15	0.00	7.40	7.33	0.07
	Max lbs/day all phases							
			2 147.	15 0.	00 12.	33 7.3	5.0	0

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jan '05

Phase 2 Duration: 1 months
On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	
Hours/Day	Y			
1	Rubber Tired Dozers	352	0.590	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '05 Phase 3 Duration: 8 months Start Month/Year for SubPhase Building: Feb '05 SubPhase Building Duration: 6 months Off-Road Equipment No. Type Horsepower Load Factor Hours/Day 4 Concrete/Industrial saws 84 0.730 8.0 6 Other Equipment 190 0.620 8.0 4 Rough Terrain Forklifts 94 0.475 8.0 Start Month/Year for SubPhase Architectural Coatings: Aug '05 SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Sep '05 SubPhase Asphalt Duration: 1 months Acres to be Paved: .5 Off-Road Equipment No. Type Horsepower Load Factor Hours/Day 0.575 8.0 1 Graders 174 1 132 0.590 8.0 Pavers 0.430 8.0 1 Rollers 114 CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day) PM10 PM10 PM10 Source ROG NOxCO SO2 TOTAL EXHAUST DUST *** 2005*** Phase 1 - Demolition Emissions Fugitive Dust 0.00 0.00 0.00 0.00 0.00 0.00 Off-Road Diesel 0.00 0.00 0.00 0.00 0.00 On-Road Diesel 0.00 0.00 0.00 0.0 Worker Trips 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Maximum lbs/day 0.00 Phase 2 - Site Grading Emissions Fugitive Dust 5.00 5.00 Off-Road Diesel 4.31 24.80 29.50 0.62 0.62 0.00 0.00 0.00 0.00 0.00 0.00 On-Road Diesel 0.00 0.00 0.00 Worker Trips 0.03 0.07 0.62 0.00 0.00 0.00 Maximum lbs/day 4.34 24.87 30.12 0.00 5.62 0.62 5.00 Phase 3 - Building Construction Bldq Const Off-Road Diese 11.99 82.54 14.17 0.41 0.41 0.00 Bldg Const 0.26 5.47 0.00 0.07 Worker Trips 0.46 0.00 0.07 Arch Coatings Off-Gas 381.94 Arch Coatings Worker Trips 0.42 0.20 5.17 0.00 0.07 0.00 0.07 Asphalt Off-Gas 0.06

Asphalt Off-Ro	ad						
Diesel	4.00	25.08	33.99	_	1.05	1.05	0.00
Asphalt On-Roa	.d						
Diesel	0.01	0.23	0.05	0.00	0.01	0.01	0.00
Asphalt Worker							
Trips	0.02	0.01	0.30	0.00	0.00	0.00	0.00
Maximum lbs/d	ay 382.36	82.80	34.35	0.00	1.13	1.06	0.07
Max lbs/day							
all phases	382.36	82.80	34.35	0.00	6.06	1.06	5.00

Construction-Related Mitigation Measures

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jan '05

Phase 2 Duration: 1 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	
Hours/Day				
1	Rubber Tired Dozers	352	0.590	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '05

Phase 3 Duration: 8 months

Start Month/Year for SubPhase Building: Feb '05

SubPhase Building Duration: 6 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	
Hours/Day				
4	Concrete/Industrial saws	84	0.730	8.0
6	Other Equipment	190	0.620	8.0
4	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Aug '05

SubPhase Architectural Coatings Duration: 1 months

Start Month/Year for SubPhase Asphalt: Sep '05

SubPhase Asphalt Duration: 1 months

Acres to be Paved: .5

Off-Road Equipment

Type	Horsepower	Load Factor	
Graders	174	0.575	8.0
Pavers	132	0.590	8.0
Rollers	114	0.430	8.0
	Graders Pavers	Graders 174 Pavers 132	Graders 174 0.575 Pavers 132 0.590

AREA SOURCE EMISSION ESTIMATES	(Summer	Pounds per	Day, Unmiti	igated)	
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.10	1.32	0.55	_	0.00
Wood Stoves - No summer emissi	ons.				
Fireplaces - No summer emission	ns				
Landscaping	0.25	0.02	1.96	0.03	0.00
Consumer Prdcts	3.91	-	-	_	_
TOTALS(lbs/day,unmitigated)	4.26	1.34	2.51	0.03	0.01

UNMITIGATED OPERATIONAL EMISSIONS

Retirement community Regnl shop. center	ROG	NOx	CO	SO2	PM10
	3.84	2.96	33.22	0.03	2.48
	9.20	9.84	104.91	0.08	7.63
TOTAL EMISSIONS (lbs/day)	13.04	12.80	138.13	0.11	10.10

Includes correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Retirement community Regnl shop. center	3.48 trips / dwelling units 42.94 trips / 1000 sq. ft.	80.00 32.70	278.40 1,404.14

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lb	s 15.10	4.00	93.40	2.60
Light Truck 3,751- 5,75	0 15.50	1.90	96.80	1.30
Med Truck 5,751-8,50	0 6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,00	0 1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,00	0 0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,00	0 1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,00	0.80	0.00	12.50	87.50
Line Haul > 60,000 lb	s 0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

Residential				Commercial		
	Home-	Home-	Home-			
	Work	Shop	Other	Commute	Non-Work	Customer

Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Regnl shop. center				2.0	1.0	97.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Phase 2 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel has been changed from off to on.

Phase 2 mitigation measure Off-Road Diesel Exhaust: Use lean-NOx catalyst has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)

has been changed from off to on.

Changes made to the default values for Area

The wood stove option switch changed from on to off. The fireplease option switch changed from on to off. The landscape year changed from 2004 to 2005.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.

The operational emission year changed from 2004 to 2005.

The double counting internal work trip limit changed from to 28.08276.

The double counting shopping trip limit changed from to 14.04138.

The double counting other trip limit changed from to 119.712.

The travel mode environment settings changed from both to: residential

Appendix B Cultural Resource Study

Cultural Resources Study

Introduction and Methods

For the purposes of CEQA, historical resources usually include prehistoric and historical archaeological sites and the built environment. Efforts to identify cultural resources in the project area included a record search, a literature review, an archaeological survey, and consultation with the Native American Heritage Commission (NAHC), Native American representatives, and a local historical society.

Record Search

A record search was conducted at the South Central Coastal Information Center at California State University, Fullerton on January 21, 2004. This record search consulted the state's database of previous cultural resources studies and previously recorded archeological sites, as well as pertinent historical inventories and historic maps. According to federal, state, and local historical registers, no previously identified historic properties or landmarks are located within or adjacent to the project area.

The results of the record search indicated that the project area had not been previously surveyed for cultural resources. No previously recorded cultural resources were identified within the project area. However, one previously identified prehistoric archaeological site is located within 0.5 mile of the project area.

Archival Research

Archival research was conducted at the University of California, Irvine, and in the Jones & Stokes archives. This research was undertaken in an effort to identify historically significant people, events, and trends that may have been associated with the project area, or about which the project area could provide significant new information. The research also assisted in determining the potential for subsurface archaeological deposits. Resources reviewed included county and city histories, ethnographic literature, and historic topographic maps. According to historic topographic maps, the project area was not developed at the turn of the twentieth century, nor does it appear that the federal government had formally sectioned this area (USGS 1896). In the 1942 topographic map, the

project area still appears undeveloped although there is much more development in the immediate area (USGS 1942). No development appears to have occurred within the project area since the 1940s, except for its more recent use as a parking area, which included grading, importation of fill material, and the placement of asphalt paving in isolated portions (USGS 1965).

Consultation

Jones & Stokes sent a letter to the NAHC requesting a review of the sacred lands file as well as a list of Native American representatives to be contacted for information regarding sacred sites within the project area. According to the NAHC response, no known sacred sites are within the project area. The NAHC also provided a list of twelve Native American representatives to be contacted for information. Letters were sent to all representatives informing them of the project and requesting information regarding the project's effect on potential resources.

One response was received from the Native American community contacted for this project. Mr. Anthony Morales, Chairman of the Gabrieliño/Tongva contacted Jones & Stokes by telephone in response to the request for information. Mr. Morales was concerned that the project area is sensitive for Native American cultural resources and requested that a Native American monitor be on site for all ground-disturbing activities.

In addition to the Native American community, a letter describing the project was also sent to the Westminster Museum/Historical Society requesting information on historic sites within the project area. The letter was returned to Jones & Stokes as an undeliverable letter with no known forwarding address.

Because the project area is located within Little Saigon, efforts were made to find representatives of this community that could be contacted for information about the project area and to discuss any concerns regarding the project. However, no community groups were identified through research or contact with City government representatives.

Pedestrian Survey

A Jones & Stokes archaeologist surveyed the project area in 10-meter east/west trending transects. The project area is currently a level parcel that had been previously graded and, at least partially, covered in fill material. Portions of the parcel at the entrances to the lot along Moran Street were paved at the time of survey. These paved areas appeared to have been driveways onto the lot. The elevation of the parcel appeared to be the same (40 to 50 feet) as it was in both 1896 and 1942 (USGS 1896, 1942). Although fill material was imported onto the site, it did not appear to be a substantial amount.

Visibility was excellent (100%) throughout a majority of the project area. Areas with minimal visibility (0- to 5-percent) included a small 5- to 10-foot margin along the eastern border of the project area where dense ruderal vegetation was located. In addition, small scattered areas of clustered fill material and the paved areas had low visibility (0- to 5-percent). No archaeological resources were identified during the survey.

CEQA Significance Criteria

Regulatory compliance with regard to cultural resources is governed by CEQA. CEQA Guidelines define a significant cultural resource as "a resource listed in or eligible for listing in the California Register of Historical Resources" (Pub. Res. Code Section 5024.1). A resource may be eligible for inclusion in the California Register of Historical Resources if it meets any one of the following criteria:

- 1. it is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- 2. it is associated with the lives of important historical figures;
- 3. it embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic value; or
- 4. it has yielded, or may be likely to yield, important prehistoric or historic information.

Under CEQA, an impact would be considered significant if a project would have an effect that may change the significance of a resource (Public Resources Code 5020.1). Actions that would change the significance of a historical resource include: demolition, replacement, substantial alteration, and relocation of historic properties.

The question of integrity is an additional factor that must be addressed. Integrity is determined through application of seven factors: location, design, setting, workmanship, materials, feeling, and association. These seven can be roughly grouped into three types of integrity considerations. Location and setting relate to the relationship between the property and its environment. Design, materials, and workmanship, as they apply to historic buildings, relate to construction methods and architectural details. Feeling and association are the least objective of the seven criteria, and pertain to the overall ability of the property to convey a sense of the historical time and place in which it was constructed. Loss of integrity, if substantial, will render a property ineligible, irrespective of significance. Likewise, a resource can have complete integrity, but if it lacks significance it must also be considered ineligible.

Even without a formal determination of significance and nomination for listing in the California Register of Historical Resources, the lead agency can determine that a resource is potentially eligible for such listing to assist in determining whether a significant impact would occur. The fact that a resource is not listed in

the California Register of Historical Resources—or has not been determined eligible for such listing—and is not included in a local register of historic resources does not preclude an agency from determining that a resource may be a historical resource for the purposes of CEQA.

Prehistory Context

The prehistoric occupation of southern California is divided chronologically into several temporal phases of horizons (Moratto 1984). Horizon I, or the Early Man Horizon, began at the first appearance of people in the region (perhaps approximately 11,000 years ago) and continued until about 5000 B.C. Although little is known about these people, it is assumed that they were semi-nomadic and subsisted primarily on game.

Horizon II, also known as the Millingstone Horizon or Encinitas Tradition, began around 5000 B.C. and continued until about 1500 B.C. The Millingstone Horizon is characterized by widespread use of milling stones (manos and metates), core tools, and few projectile points or bone and shell artifacts. This horizon appears to represent a diversification of subsistence activities and a more sedentary settlement pattern. Archaeological evidence suggests that hunting became less important and that reliance on collecting shellfish and vegetal resources increased (Moratto 1984).

Horizon III, the Intermediate Horizon or Campbell Tradition, began around 1500 B.C. and continued until about A.D. 600–800. Horizon III is defined by a shift from the use of milling stones to increased use of mortar and pestle, possibly indicating a greater reliance on acorns as a food source. Projectile points become more abundant and, together with faunal remains, indicate increased use of both land and sea mammals. (Moratto 1984).

Horizon IV, the Late Horizon, which began around A.D. 600–800 and terminated with the arrival of Europeans, is characterized by dense populations; diversified hunting and gathering subsistence strategies, including intensive fishing and sea mammal hunting; extensive trade networks; use of the bow and arrow; and a general cultural elaboration (Moratto 1984).

Ethnography

When Spanish explorers and missionaries first visited the southern coastal areas of California, the indigenous inhabitants of the Los Angeles and Orange County areas were given the Spanish names "Gabrieliño" and "Juaneño." The names Gabrieliño and Juaneño come from the indigenous people's associations with the Mission San Gabriel and the Mission San Juan Capistrano, respectively.

Gabrieliño territory included the watersheds of the San Gabriel, Santa Ana, and Los Angeles rivers; portions of the Santa Monica and Santa Ana mountains; the Los Angeles basin; the coast from Aliso Creek to Topanga Creek; and San Clemente, San Nicolas, and Santa Catalina Islands (Bean and Smith 1978). Juaneño territory extended from around Agua Hedionda Creek on the south to

near Aliso Creek on the northwest. The boundary extended inland to Santiago Peak, southward to the east of Palomar Mountain, across to the eastern side of the Elsinore Fault Valley, and around the southern slope of the valley of San Jose (Bean and Shipek 1978). Both the Gabrieliño and Juaneño languages are classified as belonging to the Takic family of Uto-Aztecan stock (Shipley 1978, Bean and Shipek 1978).

Although the project area falls within the traditional boundaries of the Gabrieliño, the City of Westminster is located near the boundary between the two groups. It is likely that this shared boundary resulted in certain similarities in social structure and transmission of goods. Therefore, both groups are discussed below.

Gabrieliño

Because Gabrieliño culture began to dissolve soon after contact with Europeans, little is known of the group's way of life. Much of the available ethnographic information about the Gabrieliño Indians is from the letters of Hugo Reid. Reid was a Scottish settler who married a Gabrieliño woman and subsequently observed their ways of life throughout the early 1850s. Other ethnographic details were collected by Harrington (1942), Kroeber (1925), and others in the early 1900s. The available information has been summarized by Bean and Smith (1978).

The Gabrieliño had an elaborately developed material culture. Technological and artistic items included shell set in asphaltum; carvings; painting; an extensive steatite industry; baskets; and a wide range of stone, shell, and bone objects that were both utilitarian and decorative.

Gabrieliño subsistence was based on a varied hunting and gathering strategy that included large and small land mammals, sea mammals, river and ocean fish, and a variety of plant resources. Deep sea fishing was accomplished from boats of wooden planks tied together and sealed with asphaltum. Sea mammals were taken with harpoons, spears, and clubs. River fishing was undertaken with the use of line and hook, nets, basket traps, spears, and poisons. Land mammals were hunted with bow and arrow, trapped, clubbed, or taken with the use of deadfalls.

The Gabrieliño were apparently first contacted by Europeans in 1542 when Cabrillo entered the area. Following other Spanish visits to the region, colonization began in 1769 and resulted in the establishment of Missions San Fernando and San Gabriel. Because of Euro–American-introduced diseases and the harsh effects of mission life, the Gabrieliño population and culture were greatly diminished. Following the secularization of the missions, most surviving Gabrieliño became wage laborers on the ranchos of Mexican California.

Juaneño

Juaneño social structure and philosophy was similar the other Takic-speaking tribes. However, the Juaneño had more rigid social structure and greater population density. The Juaneño lived in sedentary and autonomous village groups, each with specific hunting, collecting, and fishing areas. Typically, these were located in valley bottoms, along streams, or along coastal strands near mountain ranges (Bean and Shipek 1978). Villages were usually in sheltered coves or canyons on the sides of slopes near good water supplies.

Like the Gabrieliño, the Juaneño subsistence relied on both hunting and gathering strategy and included large and small land mammals, sea mammals, river and ocean fish, and a variety of plant resources. Near-shore ocean fishing was done from canoes with the help of basketry fish traps, dip nets, hooks of bone or shell, and harpoons. Land mammals were hunted by individuals and groups using bows and arrows while small mammals were captured with a curved throwing stick (Bean and Shipek 1978).

With the establishment of the Mission San Juan Capistrano in 1776, native populations were removed from the coastal areas into the mission environment. European diseases immediately spread through the population, and living conditions at the mission accelerated a population decline. Following the secularization of the missions, many Juaneños were forced to compete for useable land, resulting in revolts and uprisings against Mexican rancheros who were using the Indians as serfs. With the introduction of Anglo-Americans into California, Juaneños were displaced from their remaining lands and moved onto reservations (Bean and Shipek 1978).

Historical Context

Spanish Period

In 1769, Gaspar de Portola, a Spanish military man and aristocrat, commanded an expedition traveling the territory of Alta California with the goal of reaching the Port of Monterey. When members of the expedition first reached the boundaries of present-day Orange County, they named the region "The Valley of Saint Anne" which would eventually become Santa Ana. In 1770, the party reached the Valley of San Juan Capistrano and set up camp in what was described by Father Crespi as a lush valley with many resources (Hoover et al. 1990). Following the expedition, Father Junipero Serra established the Mission San Juan Capistrano in 1776. The mission took nine years to construct and was consecrated in September 1806. In 1801, Jose Antonio Yorba, a corporal in Portola's expedition, was awarded pasturage rights to mission lands. In 1810, the King of Spain granted Yorba and his nephew the rancho of eleven leagues.

Mexican Period

During the Spanish period, land was given to veterans of the Spanish army of occupation in appreciation for military service (Robinson 1948). Although popularly referred to as Spanish ranchos, land grants were made only during the Mexican period. Liberal incentives were offered to persons wishing to raise livestock. In theory, land grants did not exceed 50,000 acres and grantees were required to build a permanent home on the land and occupy it, as well as pasture cattle nearby (Hampson 1993). In fact, these guidelines were loose. Boundaries of land grants were laid out without surveyors and often used markers as ephemeral as a pile of stones or a cow skull in a bush. The requirements were often not met, and multiple land grants were given to a single individual (Bean 1968). More than 500 ranchos existed in California in 1846; all but about 30 had their origin in Mexican grants (Robinson 1948).

The primary economic pursuit of the ranchos was raising cattle. Rancheros (Mexican and Californian ranchers) raised a small, sturdy, long-horned, black breed of cattle. The cattle roamed free range for most of the year, and were rounded up in the spring or summer and driven to a specified area near a coastal port for slaughter (Bean 1968). Rancho cattle provided dried beef, tallow, and hides. These products were traded raw; little manufacturing took place at the ranchos. Most ranchos employed workers, sometimes numbering in the hundreds, and among these workers were former Mission Indians.

The United States had vowed to honor Spanish and Mexican land grants when California was admitted to statehood in 1850. A land commission was established in San Francisco and land owners were required to prove the validity of their land claims. Lax record-keeping proved to be a significant problem and fully one third of the claims were rejected (Hampson 1993). The process of proving legal ownership of the land was time consuming and costly, and many rancheros incurred huge debts. Bankruptcies were common, and many ranchos were mortgaged to pay legal bills.

The decline of the ranchos may be attributed to a number of factors. Many rancheros lost their ranches when California was admitted to statehood and their land grants had to meet U.S. specifications. Other rancheros became impoverished by fighting legal battles to keep their ranchos. Because of their legal debts, the prices of beef, hide, and tallow went up, making their products less competitive with out-of-state beef products. Finally, a series of bad years, including a flood in 1862 followed by two years of severe drought, brought down the cattle industry. When the climate returned to normal, it was too late. Nearly all the herds were gone, slaughtered for hide and tallow by rancheros trying to cut their losses. Within a short time most ranchos fell into foreclosure and were sold at sacrifice prices (Hampson 1993).

Rancho Las Bolsas

During the Spanish period, Pedro Fages granted a 156,000- acre stretch of land to Manuel Nieto in 1784 (OCCGS 1998). In 1834, after Mexico had taken over

California, the Mexican governor, Jose Figueroa, gave this acreage, the Rancho Las Bolsas, to Catarina Ruiz. During a public land auction in the 1850s, Abel Stearns purchased the land and formed the Stearns Ranch Company (Orange County Historical Society 2004). Eventually, Stearns sold Rancho Las Bolsas to developers from Los Angeles and San Bernardino Counties who would, in turn, sell off portions to eager settlers. Eventually, the City of Westminster would be one of the developments on this rancho.

American Period

After the signing of the Treaty of Guadalupe Hidalgo in 1848, California became the 31st state to join the Union, in 1850. Disillusioned Gold Rush miners, unsuccessful in their attempts for expedited fortune, began to venture out of the foothills and into the valleys to try their hands at raising livestock and farming. Although most southern California rancheros refused to partition their lands out to the new arrivals, the drought of 1862–1863 decimated the cattle industry and the government acquired control of the lands (Rawls and Bean 1993). Immediately, the State began to sell off sections of the land to European ranchers and farmers. Sheep had proved a heartier stock during the drought, and a number of large successful ranching enterprises engaged in sheep ranching at this time, including the Irvine Ranch. Founded by James Irvine, the ranch produced the first commercial planting of oranges in 1886. During the growth of Orange County's ranches and farms, Anaheim, established in 1857 by a group of German settlers from San Francisco, was the pioneer town (Hoover et al. 1990). Initially, supplies came to Anaheim through the Port of San Pedro until the colonists established the Anaheim Lighter Company and developed a port closer to the colony. This port served the Santa Ana Valley until the opening of the Southern Pacific Railroad in 1875. Other settlements soon followed, including Tustin, Fullerton, Orange, Newport Beach, and Huntington Beach.

In the 1880s, Orange County was still considered a part of the greater Los Angeles area. Residents, frustrated with conducting commerce at such great distances, began a movement to establish a new county. In 1889, the State Legislature approved the formation of the new county of Orange, with the county seat located in Santa Ana. At the time of the formation of the new county, only three cities, Anaheim, Santa Ana, and Orange, were incorporated (Kao 2002). By the turn of the twentieth century, urban growth was infringing upon agriculture in southern California. William Mulholland had brought water to Los Angeles via the aqueduct in 1913, which allowed for explosive growth in both agricultural enterprises and population in Los Angeles and the Santa Ana River Valley. In 1906, the first Red Car line was completed, extending from a split in the Long Beach line and continuing through Seal Beach and Huntington Beach to its terminus at Balboa Peninsula in Newport Beach. Extension of the Pacific Electric into Orange County made speculation, settlement, and travel more convenient.

The introduction of the automobile into southern California eventually led to the collapse of the Red Cars. The construction of freeways had been initiated with World War II as a way to transfer goods throughout the country at a rapid pace. World War II also initiated the development of several military bases in Orange

County, including the Santa Ana Army Air Base and El Toro in Irvine. After the war, men who had been stationed in Orange County brought their families out west and initiated an enormous urban sprawl. Large freeway construction during the 1950s and 1960s exacerbated the urban expansion.

City of Westminster

The Westminster Township was formed out of the Rancho Los Alamitos and included portions of Rancho La Bolsa Chica and Las Bolsas (Wilson 1959). Following Anaheim, Westminster was the second colony founded in present-day Orange County. Established in 1870 by the Reverend Lemuel P. Webber, the town was named for the famed Westminster Abbey that prescribed the basic tenets of the Presbyterian Church (Bollman 1983; Neugebauer 1970). Entering into negotiations with a local land company, Reverend Webber purchased 6,500 acres and acquired an additional 3,000 acres in 1874 (Bollman 1983). Reverend Webber had devised a town plan that included 160 acres near the center of the tract to be set aside for the main plaza. Surrounding the plaza were farms of 40 acres that expanded to farms of 160 acres near the edge of the colony.

The first man to settle in Westminster was John Y. Anderson, who came from Anaheim in 1870. By 1875, 425 colonists had settled in the area and had begun to engage in various types of agriculture. However, low rainfall during the 1870s forced most residents to begin to experiment with artesian wells (Bollman 1983). By 1879, the county boasted 250 artesian wells, a drug store, hotel, school house, three churches, and a nursery (Neugebauer 1970). Throughout the decades beginning in the 1890s and lasting until the 1940s, Westminster remained a rural center in southern California. Dairying and agriculture, including celery, corn, squash, and beets, dominated the landscape while population booms transformed Los Angeles and the coastal regions. At the end of World War II in 1946, many servicemen who enjoyed the climate remained in California or returned later with their families. Huge housing tracts grew in areas surrounding Westminster, but it wasn't until the end of the decade that developers began turning their attention to Westminster (Neugebauer 1970). Beginning in the 1950s, Westminster experienced tremendous urban growth that ultimately overtook the agricultural industry and created the suburban landscape that exists today.

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Appendix C Revised Noise Study

Introduction and Methodology

Construction activities and traffic are the primary sources of noise associated with the implementation of the project. The project will also involve the exposure of new noise-sensitive land uses to noise from traffic and existing commercial operations.

Construction noise impacts have been assessed using an analysis method recommended by the U.S. Department of Transportation (FTA 1995) based on anticipated construction equipment types and methods of operation. Traffic noise from major streets in the plan area was modeled using the Federal Highway Administration Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic data provided by Linscott Law & Greenspan Engineers. Site-specific noise monitoring was conducted to characterize noise from existing noise sources. Existing noise levels and predicted construction and traffic noise levels were then used to assess the significance of noise impacts. Where significant noise impacts have been identified, mitigation measures to reduce noise impacts where feasible have been identified.

Sound Terminology

Sound travels through the air as waves of minute air pressure fluctuations caused by some type of vibration. In general, sound waves travel away from the sound source as an expanding spherical surface. The energy contained in a sound wave is consequently spread over an increasing area as it travels away from the source. This results in a decrease in loudness at greater distances from the sound source. The following terms are commonly used in acoustics.

Sound

A vibratory disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

Noise

Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

Decibel

Sound-level meters measure the pressure fluctuations caused by sound waves. Because of the ability of the human ear to respond to a wide dynamic range of sound pressure fluctuations, loudness is measured in terms of decibels (dB) on a logarithmic scale. This results in a scale that measures pressure fluctuations in a convenient notation and corresponds to our auditory perception of increasing loudness. dB indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.

A-Weighted Decibels

Most sounds consist of a broad range of sound frequencies. Because the human ear is not equally sensitive to all frequencies, several frequency-weighting schemes have been used to develop composite decibel scales that approximate the way the human ear responds to sound levels. The "A-weighted" decibel scale (dBA) is the most widely used for this purpose.

Equivalent Sound Level

Time-varying sound levels are often described in terms of an equivalent constant decibel level. Equivalent sound levels ($L_{\rm eq}$) are used to develop single-value descriptions of average sound exposure over various periods of time. Such average sound exposure values often include additional weighting factors for annoyance potential attributable to time of day or other considerations. The $L_{\rm eq}$ data used for these average sound exposure descriptors are generally based on A-weighted sound-level measurements. In effect, $L_{\rm eq}$ is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period.

Day-Night Average Sound Level

Average sound exposure over a 24-hour period is often presented as a day-night average sound level (L_{dn}). L_{dn} values are calculated from hourly L_{eq} values, with the L_{eq} values for the nighttime period (10:00 p.m.-7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises.

Community Noise Equivalent Level

The community noise equivalent level (CNEL) is also used to characterize average sound levels over a 24-hour period, with weighting factors included for evening and nighttime sound levels. $L_{\rm eq}$ values for the evening period (7:00 p.m.-10:00 p.m.) are increased by 5 dB, while $L_{\rm eq}$ values for the nighttime period (10:00 p.m.-7:00 a.m.) are increased by 10 dB. For given set of sound measurements, the CNEL value will usually be about 1 dB higher than the $L_{\rm dn}$ value. In practice, CNEL and $L_{\rm dn}$ are often used interchangeably.

In general, human sound perception is such that a change in sound level of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving sound level.

Percentile-Exceeded, Maximum, and Minimum Sound Level

The sound level exceeded during a given percentage of a measurement period is the percentile-exceeded sound level (L_x). Examples include L_{10} , L_{50} , and L_{90} . L_{10} is the A-weighted sound level that is exceeded 10% of the measurement period, L_{50} is the level exceeded 50% of the period, and so on. L_{50} is the median sound level measured during the measurement period. L_{90} , the sound level exceeded 90% of the time, excludes high localized sound levels produced by nearby sources such as single car passages or bird chirps. L_{90} is often used to represent the background sound level. L_{50} is also used to provide a less conservative assessment of the background sound level, while L10 generally represents the highest sound levels at a given location.

The maximum sound level (L_{max}) and the minimum sound level (L_{min}) are the maximum and minimum sound levels respectively, measured during the measurement period. When a sound meter is set to the "slow" response setting as is typical for most community noise measurements, the Lmax and Lmin values are the maximum and minimum levels measured over a one second period.

Maximum and Minimum Sound Levels

The maximum or minimum sound level (Lmax and Lmin) measured during a measurement period.

Ambient Sound

Ambient sound is the all-encompassing sound associated with a given community site, usually being a composite of sounds from many sources, near and far, with no particular sound being dominant.

Equivalencies between Various Sound Descriptors

The L_{dn} value at a site calculated from a set of measurements taken over a given 24-hour period will be slightly lower than the CNEL value calculated over the same period. Except in situations where unusually high evening sound levels occur, the CNEL value will be within 1.5 dB of the L_{dn} value for the same set of sound measurements.

The relationship between peak hourly L_{eq} values and associated L_{dn} values depends on the distribution of traffic over the entire day. There is no precise way to convert a peak hourly L_{eq} value to an L_{dn} value. However, in urban areas near heavy traffic, the peak hourly L_{eq} value is typically 2-4 dB lower than the daily L_{dn} value. In less heavily developed areas, the peak hourly L_{eq} is often equal to the daily L_{dn} value. For rural areas with little nighttime traffic, the peak hourly L_{eq} value will often be 3-4 dB greater than the daily L_{dn} value.

Working with Decibel Values

The nature of the decibel scale is such that the individual sound levels for different sound sources cannot be added directly to give the combined sound level of these sources. Two sound sources producing equal sound levels at a given location will produce a composite sound level that is 3 dB greater than either sound alone. When two sound sources differ by 10 dB, the composite sound level will be only 0.4 dB greater than the louder source alone.

Most people have difficulty distinguishing the louder of two sound sources if they differ by less than 1.5-2.0 dB. Research into the human perception of changes in sound level indicates the following:

- a 3-dB change is just perceptible,
- a 5-dB change is clearly perceptible, and
- a 10-dB change is perceived as being twice or half as loud.

A doubling or halving of acoustic energy will change the resulting sound level by 3 dB, which corresponds to a change that is just perceptible. In practice, this means that a doubling of traffic volume on a roadway, doubling the number of people in a stadium, or doubling the number of wind turbines in a wind farm will, as a general rule, only result in a 3-dB, or just perceptible, increase in noise.

Outdoor Sound Propagation

There are a number of factors that affect how sound propagates outdoors. These factors (Hoover and Keith (1996)), are summarized below.

Distance Attenuation

As a general rule, sound from localized or point sound sources spreads out as it travels away from the source and the sound level drops at a rate of 6 dB per doubling of distance. If the sound source is long in one dimension, such as traffic on a highway or a long train, the sound source is considered to be a line source. As a general rule, the sound level from a line source will drop off at a rate of 3 dB per doubling of distance. If the intervening ground between the line source and the receptor is acoustically "soft" (e.g., ground vegetation, scattered trees, clumps of bushes), an attenuation rate of 4.5 dB per doubling of distance is generally used.

Attenuation from Barriers

Any solid structure such as a berm, wall, or building that blocks the line of sight between a source and receiver serves as a sound barrier and will result in additional sound attenuation. The amount of additional attenuation is a function of the difference between the length of the sound path over the barrier and the length of the direct line of sight path. Thus, the sound attenuation of a barrier between a source and a receiver that are very far apart will be much less than the attenuation that would result if either the source or the receiver is very close to the barrier.

Molecular Absorption

Air absorbs sound energy as a function of the temperature, humidity of the air, and frequency of the sound. Additional sound attenuation on the order of 1 to 2 dB per 1,000 feet can occur.

Anomalous Excess Attenuation

Large-scale effects of wind speed, wind direction, and thermal gradients in the air can cause large differences in sound transmission over large distances. These effects when combined result in anomalous excess attenuation, which can be applied to long-term sound-level estimates. Additional sound attenuation on the order of about 1 dB per 1,000 feet can occur.

Other Atmospheric Effects

Short-term atmospheric effects relating to wind and temperature gradients can cause bending of sound waves and can influence changes in sound levels at large distances. These effects can either increase or decrease sound levels depending on the orientation of the source and receptor and the nature of the wind and temperature gradient. Because these effects are normally short-term, it is generally not practical to include them in sound propagation calculations.

Understanding these effects, however, can help explain variations that occur between calculated and measured sound levels.

Guidelines for Interpreting Sound Levels

Various federal, state, and local agencies have developed guidelines for evaluating land use compatibility under different sound-level ranges. The following is a summary of federal and state guidelines.

Federal Agency Guidelines

The federal Noise Control Act of 1972 (Public Law 92-574) established a requirement that all federal agencies administer their programs to promote an environment free of noise that jeopardizes public health or welfare. The U.S. Environmental Protection Agency (EPA) was given the responsibility for:

- providing information to the public regarding identifiable effects of noise on public health or welfare,
- publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety,
- coordinating federal research and activities related to noise control, and
- establishing federal noise emission standards for selected products distributed in interstate commerce.

The federal Noise Control Act also directed that all federal agencies comply with applicable federal, state, interstate, and local noise control regulations.

Although EPA was given major public information and federal agency coordination roles, each federal agency retains authority to adopt noise regulations pertaining to agency programs. EPA can require other federal agencies to justify their noise regulations in terms of the federal Noise Control Act policy requirements. The Occupational Safety and Health Administration retains primary authority for setting workplace noise exposure standards. The Federal Aviation Administration retains primary jurisdiction over aircraft noise standards, and the Federal Highway Administration (FHWA) retains primary jurisdiction over highway noise standards.

In 1974, in response to the requirements of the federal Noise Control Act, EPA identified indoor and outdoor noise limits to protect public health and welfare (communication disruption, sleep disturbance, and hearing damage). Outdoor L_{dn} limits of 55 dB and indoor L_{dn} limits of 45 dB are identified as desirable to protect against speech interference and sleep disturbance for residential, educational, and healthcare areas. Sound-level criteria to protect against hearing damage in commercial and industrial areas are identified as 24-hour L_{eq} values of 70 dB (both outdoors and indoors).

The FHWA has adopted criteria for evaluating noise impacts associated with federally funded highway projects and for determining whether these impacts are sufficient to justify funding noise mitigation actions (23 CFR 772). The FHWA noise abatement criteria are based on peak hourly L_{eq} sound levels, not L_{dn} or 24-hour L_{eq} values. The peak 1-hour L_{eq} criteria for residential, educational, and healthcare facilities are 67 dB outdoors and 52 dB indoors. The peak 1-hour L_{eq} criterion for commercial and industrial areas is 72 dB (outdoors).

The U.S. Department of Housing and Urban Development has established guidelines for evaluating noise impacts on residential projects seeking financial support under various grant programs (44 FR 135:40860-40866, January 23, 1979). Sites are generally considered acceptable for residential use if they are exposed to outdoor L_{dn} values of 65 dB or less. Sites are considered "normally unacceptable" if they are exposed to outdoor L_{dn} values of 65-75 dB. Sites are considered unacceptable if they are exposed to outdoor L_{dn} values above 75 dB.

State Agency Guidelines

In 1987, the California Department of Health Services published guidelines for the noise elements of local general plans. These guidelines include a sound level/land use compatibility chart that categorizes various outdoor L_{dn} ranges into up to four compatibility categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable) by land use. For many land uses, the chart shows overlapping L_{dn} ranges for two or more compatibility categories.

The noise element guidelines chart identifies the normally acceptable range for low-density residential uses as less than 60 dB and the conditionally acceptable range as 55-70 dB. The normally acceptable range for high-density residential uses is identified as L_{dn} values below 65 dB, and the conditionally acceptable range is identified as 60-70 dB. For educational and medical facilities, L_{dn} values below 70 dB are considered normally acceptable and L_{dn} values of 60-70 dB are considered conditionally acceptable. For office and commercial land uses, L_{dn} values below 70 dB are considered normally acceptable and L_{dn} values of 67.5-77.5 are categorized as conditionally acceptable.

These overlapping L_{dn} ranges are intended to indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land use compatibility at specific locations.

The California Department of Housing and Community Development has adopted noise insulation performance standards for new hotels, motels, and dwellings other than detached single-family structures (24 CCR T25-28). These standards require that "interior CNELs with windows closed, attributable to exterior sources, shall not exceed an annual CNEL of 45 dB in any habitable room."

The California Department of Transportation uses the FHWA criteria as the basis for evaluating noise impacts from highway projects.

Existing Conditions

The existing noise environment in the project area is dominated by noise from vehicular traffic traveling on Moran Street and Bishop Place and vehicular traffic on surrounding roadways in the project vicinity. Auto shop operations located directly west of the project site across Moran Street are also a source of noise.

Short term noise monitoring was conducted in the project area on February 5, 2004 to characterize existing weekday noise conditions and on February 7, 2004 to characterize weekend noise conditions. Table 1 summarizes short-term noise monitoring conducted at the project site. Noise monitoring was conducted at three locations in the project area. Position #1 was located at the approximate midpoint of the project site on Moran Street about 30 feet from the roadway centerline. Position #2 was located along the east side of the project site. Position #3 was located at the approximate midpoint of the project site on Bishop Place about 30 feet from the roadway centerline. Figure 1 shows the noise monitoring location.

Table 1. Summary of Noise Monitoring

Position	Date	Start Time	Duration (minutes)	Sound Level (dBA)	L ₁₀	L ₉₀	Lmax	Sources
1	2/05/2004	1:45	10	64.4	63.4	51.9	87.6	Traffic noise, tow truck, sander, people talking
1	2/07/2004	3:15	10	57.3	60.4	47.8	72.7	Traffic noise, birds chirping, auto service noise (drill), car stereo, car doors, people talking
2	2/05/2004	2:00	10	53.8	55.2	47.4	69.6	Traffic noise, car alarm, people taking
2	2/07/2004	3:00	10	49.8	52.0	46.5	60.0	Traffic noise, car alarm
3	2/05/2004	2:35	10	60.3	64.4	50.7	703	Traffic noise
3	2/07/2004	3:45	10	61.5	64.2	49.4	77.7	Traffic noise

Long term noise monitoring was also conducted in the project area between February 5, 2004 February 9, 2003 to quantify existing 24-noise conditions on the project site. The long-term monitoring position was located near the short-term Position #2. Figure 2 summarizes 24-hour noise monitoring conducted at the project site.

Traffic noise from major streets in the project area was modeled using the Federal Highway Administration Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic data provided by the project traffic engineer. Table 2 summarizes traffic noise modeling results for existing conditions in terms of L_{dn}.

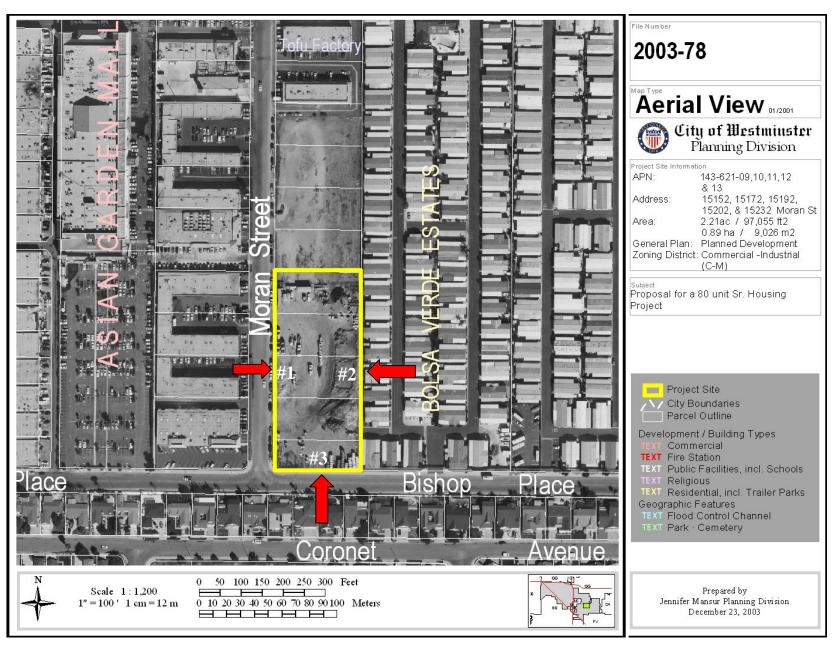


Figure 1. Noise Monitoring Locations

Figure 2. Long-Term Noise Monitoring

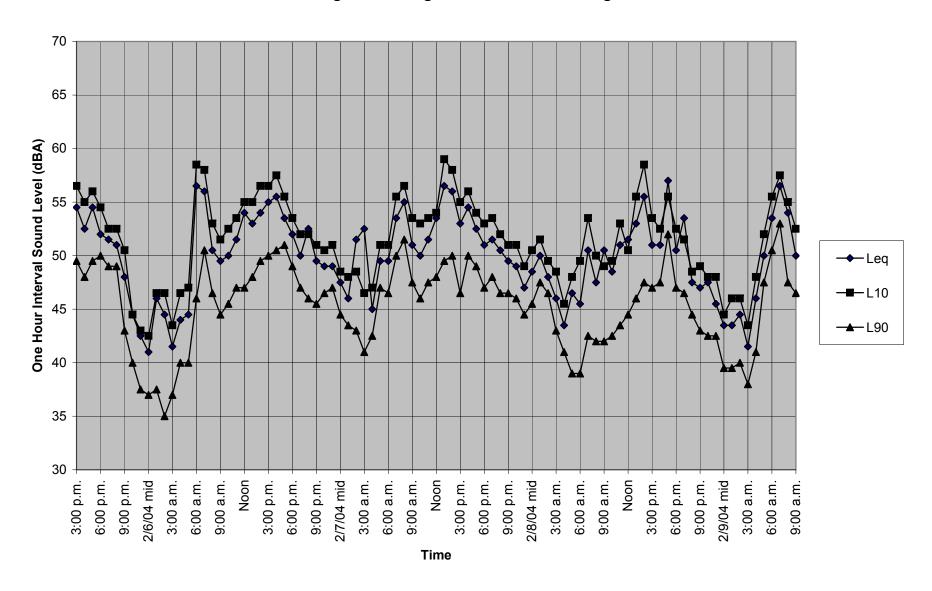


Table 2. Summary of Traffic Modeling for Existing Conditions

			Dist	ance to Contou	ır (Feet)
_	_	Sound Level at 100 Feet from			
Roadway	From	Centerline (L _{dn})	$70 L_{dn}$	65 L _{dn}	$60 L_{dn}$
Bolsa Ave.	West of Magnolia Street	67	58.9	127.0	273.6
	Magnolia St. to Cultrual Ct.	67	65.5	141.0	303.8
	Cultrual Ct. to Moran St	68	69.8	150.4	324.1
	Moran St. to Bushnard St.	68	75.4	162.4	349.9
	Bushard St. to Brookhurst St.	69	80.0	172.4	371.5
	East of Brookhurst St.	68	77.2	166.3	358.4
Bishop Place	West of Magnolia Street	57	12.8	27.6	59.5
-	Magnolia St. to Moran St.	61	23.9	51.4	110.8
	Moran St. to Bushnard St	59	NA	42.9	92.3
	East of Bushnard St.	56	NA	26.1	56.2
Magnolia St.	North of Bolsa Ave	68	68.2	146.9	316.4
	Bolsa Ave to Bishop Place	67	61.1	131.7	283.8
	South of Bishop Pl.	66	57.1	123.1	265.1
Cultrual Ct.	North of Bolsa Ave	57	NA	31.2	67.3
	South of Bolsa Ave	54	NA	19.3	41.7
Moran St.	North of Bolsa Ave	56	NA	23.7	51.0
	Bolsa Ave to Bishop Place	57	NA	29.8	64.3
Bushard St.	North of Bolsa Ave	62	31.3	67.5	145.4
	Bolsa Ave to Bishop Place	60	20.7	44.5	95.9
	South of Bishop Pl.	59	NA	41.1	88.5
Brookhurst St.	North of Bolsa Ave	67	63.1	136.0	293.1
	South of Bolsa Ave	66	58.3	125.6	270.6

NA- Contour is within roadway.

Note: Where barriers are located between the roadway and adjacent residences, the predicted sound level would be approximately 5 dB less, and the distance to the contour would be approximately half the distance indicated

Existing Noise-Sensitive Land Uses

The city's general plan noise element states that noise-sensitive land uses are those uses where any noise could be greatly disruptive without effective noise control. It further states that these are uses where a quiet outdoor environment is important to health and quality of life. The city considers residential uses to be noise sensitive.

Noise-sensitive land uses in the project area that could be affected by the project include Bolsa Verde Estates Mobile Home Park located to the east of the project site. A six-foot high block wall is located between the project site and the mobile home park. Single-family residential are located to the south of the project site along Coronet Avenue. The backyards of these residences face Bishop Place. A six-foot high block wall is located between these residences and Bishop Place.

Noise Standards

State of California Noise Insulation Standards

Article 4 of the California Administrative Code (California Noise Insulation Standards, Title 25, Chapter 1) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single family detached housing) or provide an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60 dBA CNEL (or greater) noise contour, an acoustical analysis is required to assure that interior levels do not exceed the 45 dBA CNEL annual threshold.

City of Westminster Noise Ordinance

The City's noise ordinance establishes regulatory noise standards for the City. Based on the land use type, the City designates all areas within the city as either Noise Zone 1 or Noise Zone 2. Exterior noise standards are shown in Table 3. Exceedance of noise standards is based on the duration of the intrusive noise above these standards.

Table 3. City of Westminster Noise Element Exterior and Interior Noise Level Standards

Noise Zone	Noise Level (dBA)	Time Period
Exterior		
Zone 1	55	7:00 a.m.–10:00 p.m.
	50	10:00 p.m.–7:00 a.m.
Zone 2	60	7:00 a.m10:00 p.m.
	55	10:00 p.m.–7:00 a.m.
Interior		
Zone 1	55	7:00 a.m10:00 p.m.
	45	10:00 p.m.–7:00 a.m.
Zone 2	60	7:00 a.m.–10:00 p.m.
	50	10:00 p.m.–7:00 a.m.

For exterior noise, it is unlawful to create any noise, when measured on any other residential property, by the following:

- the exterior noise standards in Table 3 for a cumulative period of more than 30 minutes in any hour; or
- the exterior noise standards in Table 3 plus 5 dBA for a cumulative period of more than 15 minutes in any hour; or
- the exterior noise standards in Table 3 plus 10 dBA for a cumulative period of more than five minutes in any hour; or
- the exterior noise standards in Table 3 plus 15 dBA for a cumulative period of more than one minute in any hour; or
- the exterior noise standards in Table 3 plus 20 dBA for any period of time.

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to categories one through four shall be increased to reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under the fifth category shall be increased to reflect the maximum ambient noise level.

For interior noise, it is unlawful to create any noise, when measured within the boundaries of the City, by the following:

- the interior noise standards in Table 3 for a cumulative period of more than five minutes in any hour; or
- the interior noise standards in Table 3 plus 5 dBA for a cumulative period of more than one minute in any hour; or
- the interior noise standards in Table 3 plus 10 for any period of time.

In the event the ambient noise level exceeds any of the first two noise limit categories above, the cumulative period applicable to categories one and two shall be increased to reflect the ambient noise level. In the event the ambient noise level exceeds the third noise limit category, the maximum allowable noise level under the third category shall be increased to reflect the maximum ambient noise level.

Construction activities are exempted from the City's noise ordinance, provided that construction activities occur only between the hours of 7:00 a.m. and 8:00 p.m., Monday through Saturday. Construction activities may not occur on Sundays or federal holidays. Construction activities that occur outside of these hours are subject to the City's noise ordinance.

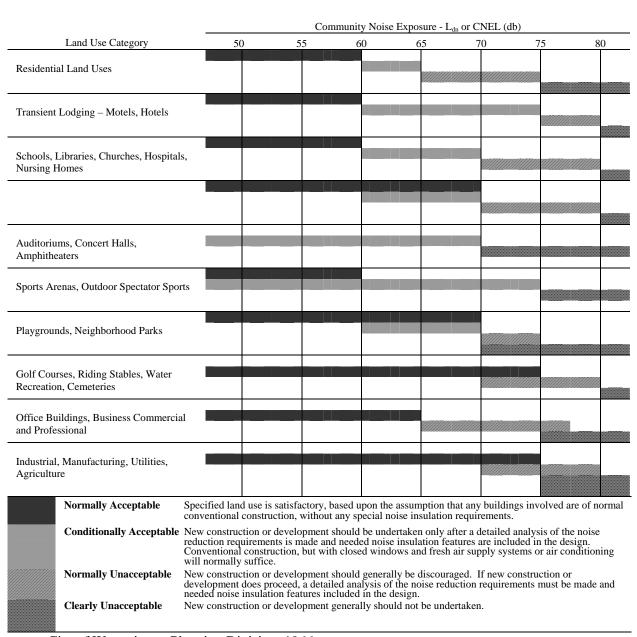
City of Westminster Noise Element

The City of Westminster has established land use compatibility guidelines in its Noise Element to protect sensitive land uses from excessive noise generators. These City's guidelines are presented in Figure 3. For residential land uses, the City has established a noise compatibility guideline of 60~dBA, $L_{dn}/CNEL$.

The City's Noise Element further identifies noise from short-term construction and industrial and commercial land uses as being stationary sources of noise. The City seeks to reduce and avoid noise impacts from stationary sources in policies VB2-1 through VB2-5. Below is a brief summary of the city's stationary noise policies.

- Policy VB2-1: Control excessive noise from stationary sources by requiring acoustical studies and construction mitigation plan for new projects in compliance with City's Noise Ordinance.
- Policy VB2-2: Required a construction-related noise mitigation plan for projects adjacent to developed/occupied noise sensitive land uses. The plan shall be submitted to the City for review and approvals prior to issuing a grading permit. The plan shall show the location of construction equipment

Figure 3. City of Westminster Land Use Compatibility Guidelines



Source: City of Westminster Planning Division 1966

- and hoe noise from this equipment will be mitigated by such methods as: Temporary noise attenuation barriers, Preferential location of equipment, and use of current technology and noise suppression equipment.
- Policy VB2-3: Address noise impacts during environmental review for discretionary projects to ensure City Noise Ordinance for standards are met.
- Policy VB2-4 Set hourly noise level performance standard in the City Noise Ordinance standards for stationary sources such as industrial, recreational, and construction activities as well as mechanical and electrical equipment, and other locally regulated noise sources. In Addition to other issues, the Noise Ordinance shall include the following:
- Policy VB2-4a. Require all projects (new construction or additions) to meet the City Noise Ordinance standards as condition of building permit approval; and
- Policy VB2-4b. Enforce the State Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform building Code (UBC). Title 24 requires that an acoustical analysis be prepared for all new developments of mutil-family dwelling, condominiums, hotels, and motels proposed for areas within the 60 db Ldn (or CNEL) contour of a major noise source. The analysis shall document that an acceptable interior noise level of 45 db Ldn (or CNEL) or below will achieve with the windows and doors closed. UBC Chapter 35 requires that common wall and floor/ceiling assemblies within the standards for the transmission of airborne sound and structure-borne impact noise.
- Policy VB 2-5: The City shall employ procedure to ensure that requirements impose pursuant to the finding of an acoustical analysis are implemented as part of the project review, building permit, and construction monitoring process.

Vibration Guidelines

Dynamic construction equipment, such as a pile driver, can create seismic waves that radiate along the surface of the earth and downward into the earth. These surface waves can be felt as ground vibration. Ground vibration can result in effects ranging from annoyance of people to damage of structures. Varying geology and distance will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will decrease with increasing distance from the vibration source.

As seismic waves travel outward from a source, they excite the particles of rock and soil through which they pass and cause them to oscillate. The actual distance that these particles move is usually only a few 10 thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as the peak particle velocity (ppv).

The City has not adopted standards relating to groundborne vibration. The potential for annoyance and physical damage to buildings from vibration are the

primary issues associated with groundborne vibration. Table 4 shows the human response to continuous groundborne vibration.

Table 4. Human Response to Continuous Vibration from Traffic

PPV (in/sec)	Human Response
0.4–0.6	Unpleasant
0.2	Annoying
0.1	Begins to annoy
0.08	Readily perceptible
0.006-0.019	Threshold of perception
Source: Whiffen 1971	- •

Table 5 shows damage thresholds for vibration generated by construction activities.

Table 5. Maximum Vibration Levels for Preventing Damage

Type of Situation	Limiting Velocity (PPV in in/sec)
Historic sites or other critical locations	0.1
Residential buildings, plastered walls	0.2 to 0.3
Residential buildings in good repair with gypsum board walls	0.4 to 0.5
Engineered structures, without plaster	1 to 1.5
Source: AASHTO 1990.	

Exposure of Existing Residences to Construction Noise

Noise from construction activities includes noise from grading, excavation, and facility construction.

A detailed inventory of construction equipment that will be used for the proposed project was not available; therefore, this noise analysis is based on anticipated construction equipment that will be used during grading and construction activities.

Table 6 presents a list of noise generation levels for various types of equipment typically used on various construction projects. The list, compiled by the Federal Transit Administration (1995), was used in this analysis to estimate construction noise. A reasonable worst-case assumption is that the three loudest pieces of equipment for each phase would operate simultaneously and continuously over at least a 1-hour period for a combined source noise level.

Table 6. Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 ft from Source
Air compressor	81
Backhoe	80
Concrete mixer	85
Concrete pump	82
Concrete vibrator	76
Bulldozer	85
Excavator/shovel	82
Generator	81
Grader	85
Loader	85
Paver	89
Scraper	89
Truck	88
Source: Federal Transit Administr	ration 1995.

Based on the noise levels, Table 7 calculates estimated sound levels from construction activities as a function of distance assuming simultaneous operation of a scraper, bulldozer, and truck for a combined source level of 93 dBA at 50 feet. The calculation in Table 7 is based on an attenuation rate of 6 dB per doubling of distance. Additional attenuation from ground absorption is ignored because of the area is generally hardscape.

Table 7. Construction Noise and Estimated Construction Noise in the Vicinity of an Active Construction Site

Entered Data:	
Construction Condition: Site leveling	
Source 1: Bull Dozer - Sound level (dBA) at 50 feet =	85
Source 2: Truck - Sound level (dBA) at 50 feet =	88
Source 3: Scraper – Sound level (dBA) at 50 feet =	89
Average Height of Sources - Hs (ft) =	10
Average Height of Receiver - Hr (ft.) =	5
Ground Type (soft or hard) =	Hard
Calculated Data:	
All Sources Combined - Sound level (dBA) at 50 feet =	92
Effective Height (Hs+Hr)/2 =	7.5
Ground factor (G) =	0.00

Distance Between Source	Geometric	Ground Effect	
and Receiver (ft.)	Attenuation (dB)	Attenuation (dB)	Calculated Sound Level (dBA)
50	0	0	92
100	-6	0	86
200	-12	0	80
300	-16	0	77
400	-18	0	74
500	-20	0	72
600	-22	0	71
700	-23	0	69
800	-24	0	68
900	-25	0	67
1000	-26	0	66
1200	-28	0	65
1400	-29	0	63
1600	-30	0	62
1800	-31	0	61
2000	-32	0	60
Calculations based on FTA	1995		

Calculations based on FTA 1995.

This calculation does not include the effects, if any, of local shielding which may reduce sound levels further.

> Residences along the west side of the Bolsa Verde Estates Mobile Home Park are the closest residences to project site. Construction noise within 50 feet of equipment may be as high as 92 dBA. A six-foot wall separates the mobile home park from the project site that would reduce construction noise by approximately 5 dB where the wall block obstructs the line of sight from the noise source to the receptor. Construction noise would be temporary and would occur over a relatively short period of time. Construction noise is exempt from the noise ordinance between 7:00 a.m. and 8:00 p.m., Monday through Saturday. Construction conducted outside these hours could violate the City's noise ordinance standards, and result in significant noise impacts. Implementation of Mitigation Measures MM-1, MM-2, and MM-3 will reduce this impact to a lessthan-significant level.

Exposure of Existing Residences to Construction Noise Pile Driving Activities

It is currently unknown if pile driving would occur during construction of the project. However, because there is a potential for pile driving, noise impacts from such activities are discussed. If required, the type of pile driving would depend on soil conditions. A vibratory pile driver is used in soft soil conditions and an impact hammer is used in hard soil conditions.

Noise levels produced by pile driving are listed in Tables 8 and 9.

Table 8. Estimated Construction Noise from Impact Pile Driving

·	
Construction Condition: Impact Pile Driving	
Source: Impact Pile Driving—Sound level (dBA) at 50 feet =	101
Average Height of Sources—Hs (ft) =	10
Average Height of Receiver—Hr (ft.) =	5
Ground Type (soft or hard) =	soft
Calculated Data:	
All Sources Combined—Sound level (dBA) at 50 feet =	101
Effective Height (Hs+Hr)/2 =	7.5
Ground factor $(G) =$	0.62

Distance Between Source and Receiver	Geometric Attenuation	Ground Effect Attenuation (dB)	Calculated Sound Level (dBA)
(ft.)	(dB)		
50	0	0	101
100	-6	-2	93
200	-12	-4	85
325	-16	-5	80
400	-18	-6	77
500	-20	-6	75
600	-22	-7	73
700	-23	-7	71
800	-24	-7	69
900	-25	-8	68
1000	-26	-8	67
1200	-28	-9	65
1400	-29	-9	63
1600	-30	-9	62
1800	-31	-10	60
2000	-32	-10	59
2500	-34	-10	57
3000	-36	-11	54

Calculations based on FTA 1995.

Note: This calculation does not include the effects, if any, of local shielding from walls, topography or other barriers which may reduce sound levels further.

Table 9. Estimated Construction Noise from Vibratory Pile Driving

Construction Condition: Vibratory Pile Driving	
Source: Pile Driving—Sound level (dBA) at 50 feet =	96
Average Height of Sources—Hs (ft) =	10
Average Height of Receiver—Hr (ft.) =	5
Ground Type (soft or hard) =	soft
Calculated Data:	
All Sources Combined—Sound level (dBA) at 50 feet =	96
Effective Height $(Hs+Hr)/2 =$	7.5
Ground factor (G) =	0.62

Distance Between Source and Receiver (ft.)	Geometric Attenuation (dB)	Ground Effect Attenuation (dB)	Calculated Sound Level (dBA)
50	0	0	96
100	-6	-2	88
200	-12	-4	80
300	-16	-5	76
400	-18	-6	72
500	-20	-6	70
600	-22	-7	68
700	-23	-7	66
750	-24	-7	65
900	-25	-8	63
1000	-26	-8	62
1200	-28	-9	60
1400	-29	-9	58
1600	-30	-9	57
1800	-31	-10	55
2000	-32	-10	54
2500	-34	-10	52
3000	-36	-11	49

Calculations based on FTA 1995.

Note: This calculation does not include the effects, if any, of local shielding from walls, topography or other barriers which may reduce sound levels further.

Table 8 calculates the estimated sound level from impact pile driving as a function of distance and assumes a source level of 101 dBA at 50 feet. Table 9 calculates the estimated sound level from vibratory pile driving as a function of distance and assumes a source level of 96 dBA at 50 feet. Point-source attenuation of 6 dB per doubling of distance and 1.7 dB per 1,000 feet (molecular absorption and anomalous excess attenuation) is also assumed (Hoover 1996). Residences along the west side of the Bolsa Verde Estates Mobile Home Park are the closest residences to the project site. As stated above, a 6-foot wall separates the mobile home park from the project site that would reduce construction noise by approximately 5 dB where the wall block obstructs the line of sight from the noise source to the receptor. Construction noise would be temporary and would occur over a relatively short period of time. Construction noise is exempt from the noise ordinance between 7:00 a.m. and 8:00 p.m., Monday through Saturday. Construction conducted outside these hours could violate the City's noise

ordinance standards and result in significant noise impacts. Implementation of the following mitigation measures will reduce this impact to a less-thansignificant level.

Mitigation Measures

MM-1. Limit hours of construction to avoid noise conflicts in local jurisdictions. Construction activities shall only occur between the hours of 7:00 a.m. and 8:00 p.m., Monday through Saturday. This measure shall be made a condition of the construction contract and shall be enforced by the appropriate local jurisdictions.

MM-2. Comply with City Policies VB2-1 and VB2-2. To comply with City Policies VB2-1 and VB2-2, a construction mitigation plan shall be implemented, consisting of, but not limited to the following:

- Locate equipment as far from noise-sensitive receptors as practicable.
- All stationary noise-generating equipment, such as pumps and generators, will be located as far as possible from nearby noise-sensitive receptors, as practicable. Where practicable, noise-generating equipment will be shielded from nearby noise-sensitive receptors by noise-attenuating buffers such as structures or haul truck trailers. Stationary noise sources located less than 300 feet from noise-sensitive receptors will be equipped with noise-reducing engine housings. Portable acoustic barriers will be placed around noise-generating equipment located within 200 feet of residences. Water tanks and equipment storage, staging, and wamup areas will be located as far from noise-sensitive receptors as possible.
- Use sound-control devices on combustion powered equipment.
- All construction equipment powered by gasoline or diesel engines will be required to have sound-control devices at least as effective as those originally provided by the manufacturer. All equipment will be operated and maintained to minimize noise generation. No equipment will be permitted to have an unmuffled exhaust.
- Shield/shroud any impact tools.
- Any impact tools used during demolition of existing infrastructure will be shrouded or shielded.
- Shut off machinery when not in use.
- Mobile noise-generating equipment and machinery will be shut off when not in use.
- Use shortest traveling routes, when practicable.
- Construction vehicles accessing the site will be required to use the shortest possible route to and from local freeways, provided the routes do not expose additional receptors to noise.

■ Disseminate essential information to residences and implement a complaint response/tracking program.

Residences within 500 feet of the construction area will be notified of the construction schedule in writing, prior to construction. The project proponent and the construction contractor will designate a noise disturbance coordinator who will be responsible for responding to complaints regarding construction noise. The coordinator will determine the cause of the complaint and will ensure that reasonable measures are implemented to correct the problem. A contact telephone number for the noise disturbance coordinator will be conspicuously posted construction site fences and will be included in the written notification of the construction schedule sent to nearby residents.

MM-3. Implementation of additional mitigation measures, as needed and/or required. Throughout the construction period, the contractor will implement additional noise mitigation measures at the request of the city required to comply with City noise ordinance standards. Additional measures may include changing the location of stationary noise-generating equipment, shutting off idling equipment, rescheduling construction activity, installing acoustic barriers around stationary sources of construction noise, using alternative equipment or construction methods that produce less noise, and other site-specific measures as appropriate.

Exposure of Existing Residence to Traffic Noise

Traffic noise was modeled using the Federal Highway Administration Traffic Noise Prediction Model (FHWA-RD-77-108). Predicted traffic noise levels in the project area under existing, design-year baseline, and design-year with project conditions are summarized in Table 10. Table 10 also compares predicted traffic noise levels. To assess the significance of traffic noise impacts on the surrounding noise-sensitive land uses, the City's threshold of 60 dBA, $L_{\rm dn}$ for residential land uses is used along with the change in traffic noise predicted to result from project implementation.

The project will not change traffic noise conditions in the project area. This impact is therefore considered to be less than significant. No mitigation is required.

Exposure of Proposed Residence to Noise

The traffic noise model results in Table 10 indicate that traffic noise will exceed 60 Ldn within about 65 feet of Moran Street and 95 feet of Bishop Place. Because primary outdoor activity areas will be available beyond this distance the exposure of the project site to exterior traffic noise is considered to be less than significant.

Residential building structures would be approximately 35 feet from the centerline of Moran Street and approximately 65 feet from the Bishop Place

			Ldn @ 100 feet			Differe		Distance (ft.) to Ld	n Noise Contour (20	05 Plus Projec
Roadway	From:	То:	Existing	2005 Future No Project	2005 Plus project	2005 Future Plus Project vs Existing	2005 Plus Project vs 2005 No Project	70 Ldn	65 Ldn	60 Ldn
Bolsa Ave	West of Magnolia Street		67	67	67	0	0	60	129	278
DUISA AVE	Magnolia St.	Cultrual Ct.	67	67	67	0	0	67	143	309
	Cultrual Ct.	Moran St.	68	68	68	0	0	71	153	330
	Moran St.	Bushard St.	68	68	68	0	0	77	165	356
	Bushard St.	Brookhurst St.	69	69	69	0	0	81	175	378
	East of Brookhurst St.		68	68	68	0	0	78	169	364
Bishop Place	West of Magnolia Street		57	57	57	0	0	13	28	61
	Magnolia St.	Moran St.	61	61	61	0	0	25	54	116
	Moran St.	Bushard St.	59	60	60	1	0	20	44	95
	East of Bushnard St.		56	56	56	0	0	12	27	58
Magnolia St.	North of Bolsa Ave		68	68	68	0	0	70	150	324
	Bolsa Ave	Bishop Place	67	67	67	0	0	63	135	290
	South of Bishop PI.		66	66	67	1	1	59	126	272
Cultrual Ct.	North of Bolsa Ave		57	57	57	0	0	15	32	68
	South of Bolsa Ave		54	54	54	0	0	9	20	42
Moran St.	North of Bolsa Ave		56	56	56	0	0	11	24	52
	Bolsa Ave	Bishop Place	57	57	57	0	0	14	31	67
Bushard St.	North of Bolsa Ave		62	63	63	1	0	32	68	148
	Bolsa Ave	Bishop Place	60	61	61	1	0	25	54	117
	South of Bishop PI.		59	59	59	0	0	19	42	9(
Brookhurst St.	North of Bolsa Ave		67	67	67	0	0	64	138	297
	South of Bolsa Ave		66	67	67	1	0	59	127	275

Segments adjacent to project site outlined.

centerline. The traffic noise modeling results in Table 10 indicate that the building facades facing Moran Street would be exposed to traffic noise of about 65 L_{dn} and facades facing Bishop Place would be exposed to traffic noise of about 44 L_{dn} . Standard building construction will typically provide 15 to 20 dB of exterior-to-interior noise reduction with window closed. This indicates that interior noise levels could exceed the state interior noise standard of 45 L_{dn} .

Measurements on the project site at Position #1 indicate that 63 dBA is exceed 10% of the time during the day and that short-term maximum sound levels can be as high as 88 dBA from traffic and activity at commercial facilities across Moran Street. This indicates that residences could be exposed to interior noise in excess of the City's interior noise standard of 55 dBA during the day and 45 dBA at night.

Because interior noise levels could exceed state and city interior noise standards this impact is considered to be significant. Implementation of MM-4 would reduce this impact to a less-than-significant level.

Mitigation Measure

MM-4. Design Residential Units to Comply with the Requirements of California Administrative Code Noise Insulation Standards. The project applicant shall retain a qualified acoustical consultant to design treatments for the residential units such that interior noise levels comply with the requirements of Article 4 of the California Administrative Code (California Noise Insulation Standards, Title 25, Chapter 1) so that interior noise levels do not exceed 45 Ldn. The design shall meet the City interior noise standard of 55 dBA between the hours 7:00 a.m. and 10:00 p.m. and 45 dBA between the hour of 10:00 p.m. and 7:00 a.m. Treatments may include but are not limited to installing acoustically rated windows and avoiding sound transmission paths through vents or other openings in the building shell. If require that windows be closed, forced fresh air ventilation shall be required.

The project applicant's acoustical consultant shall prepare a report detailing the acoustical treatments to be applied to the building for compliance with the interior noise standards. The report shall be reviewed and approved by the City prior to issuance of the building permit.

Exposure of Noise Sensitive Uses and Structures to Groundborne Vibration From Pile Driving Activity

As described above, pile driving activities could potentially occur during construction of the project. Table 11 presents vibration source levels generated from typical impact sand vibratory pile driver activity. The table was based on FTA methodology (FTA 1995) and was used in this analysis to estimate vibration from construction activities.

	Vibration Level at Receptor PPV (in/sec)			
Distance to Receptor (feet)	Impact Pile Driver	Vibratory Pile Driver		
25	0.644	0.170		
50	0.228	0.060		
60	0.180	0.046		
100	0.081	0.021		
150	0.044	0.016		
200	0.028	0.008		
250	0.020	0.005		
300	0.015	0.004		

Table 11. Vibration Source Levels from Typical Impact and Vibratory Pile Driving

The results indicate that impact pile driving may exceed a peak particle velocity of 0.2 inches per second at buildings located within approximately 60 feet. Because the closest sensitive receptor is approximately 60 feet east of the potential pile driving activity location, the vibration impact would be significant. Implementation of Mitigation Measure MM-5 would reduce this impact to a less-than-significant level.

Mitigation Measure

MM-5. Limit Vibration From Pile Driving to 0.20 Inches Per Second at Adjacent Structures. If pile driving is required, the project applicant shall retain a qualified vibration consultant to identify pile driving equipment and methods necessary to limit ground vibration from pile driving to 0.20 inches per second at the nearest structures. Use of a vibratory driver rather than an impact driver, or limiting the minimum distance between impact drivers and structures are methods than can be used to limit vibration.

Temporary Ambient Noise

Noise impacts associated with project construction will result in temporary or periodic increases in ambient noise levels. However, construction-related increases in noise are anticipated to be short-term, due to the temporary nature of construction. In addition, implementation of Mitigation Measures 1 through 3 is expected to reduce construction noise to acceptable levels. It should be noted that employment of all feasible noise attenuation devices and techniques may be capable of reducing noise levels for stationary equipment to some degree, but trucks and other mobile equipment cannot be surrounded by noise barriers at all locations. However, construction noise associated with hauling of material is periodic in nature, and would be restricted to daytime hours, similar in nature to existing vehicle noise, and all construction activity would be in accordance with standard noise control measures. With implementation of Mitigation Measures 1 through 3, construction noise impacts would be reduced to levels considered to be less-than-significant.

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Appendix D Revised Traffic Impact Study

TRAFFIC IMPACT STUDY WESTMINSTER SENIOR HOUSING

Westminster, California

INTRODUCTION

This Traffic Impact Study addresses the potential traffic impacts and circulation needs associated with the proposed Westminster Senior Housing project. The project site is located on the northeast quadrant of Bishop Place and Moran Street in the City of Westminster, California. The project site is currently vacant with curb, gutter, and sidewalk only along the Bishop Place frontage. The proposed Westminster Senior Housing project consists of an 80-unit senior housing development for sale to the 55 and older population. In addition, the project includes 160 resident/guest parking spaces and 131 retail paid parking spaces within two levels below the building.

The traffic analysis focuses on evaluating the potential traffic impacts of the proposed project on the streets and intersections in the vicinity of the project site. This traffic report is intended to satisfy the traffic impact requirements of the City of Westminster and be consistent with the current Congestion Management Program (CMP) for Orange County. The Scope of Work for this study was developed in coordination with City staff. The project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing traffic information has been researched and supplemented with manual peak period turning movement counts. The peak period traffic counts were conducted at eight locations in support of detailed intersection capacity analyses. Information concerning cumulative projects (planned and/or approved) in the vicinity of the project has been researched. Based on our research, there is one approved project within the project study area, to be completed in 2005.

This traffic report analyzes existing (2004) and future peak hour traffic conditions for the project completion Year 2005 at eight (8) key area intersections. The key intersections, listed below, were selected for evaluation based on requirements of the City of Westminster.

- 1. Magnolia Street @ Bolsa Avenue (signalized)
- 2. Cultural Court/Asian Garden @ Bolsa Avenue (signalized)
- 3. Moran Street @ Bolsa Avenue (stop-controlled NB & SB)
- 4. Bushard Street @ Bolsa Avenue (signalized)
- 5. Brookhurst Street @ Bolsa Avenue (signalized)
- 6. Magnolia Street @ Bishop Place (signalized)
- 7. Moran Street @ Bishop Place (stop-controlled SB)
- 8. Bushard Street @ Bishop Place (signalized)

The Volume-to-Capacity (V/C) characteristics and Level of Service (LOS) investigations for the AM and PM peak hour at these eight key intersections were used to evaluate the potential traffic-related impacts associated with the anticipated area growth and development the proposed Westminster Senior Housing project.

PROJECT DESCRIPTION AND LOCATION

The project site is a rectangular-shaped 2.37-acre parcel of land located in the northeast quadrant of Bishop Place and Moran Street in the City of Westminster, California. **Exhibit 1** presents a Vicinity Map, which illustrates the general location of the project and depicts the surrounding street system.

Exhibit 2 presents the conceptual site plan for the project, prepared by Architects Orange. As shown, the proposed project will involve the development of four two-story buildings with a total of 80 dwelling units and a clubhouse with 87 parking spaces. The 80 units will include 51 two-bedroom 952 square-foot (SF) units and 29 one-bedroom 740 SF units. Project access to the site will be provided via one full-movement driveway on Bishop Place and two full-movement driveways on Moran Street.

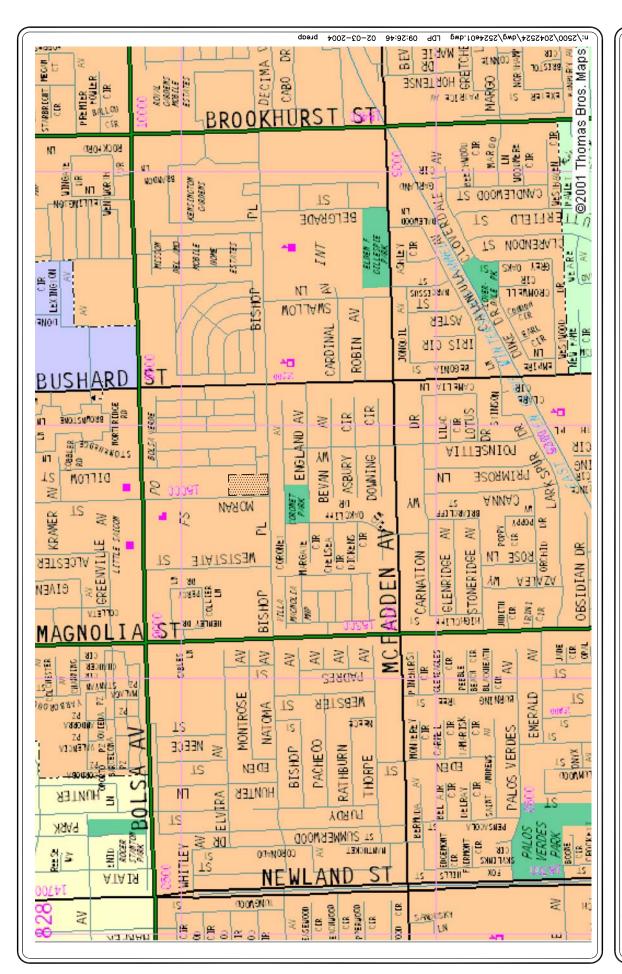
EXISTING CIRCULATION SYSTEM

The principal local network of streets serving the project includes Bishop Place, Moran Street, and Bolsa Avenue. The following discussion provides a brief synopsis of these key area streets. The descriptions are based on an inventory of existing roadway conditions.

Bishop Place is a two-lane, undivided Residential Collector roadway oriented in the east-west direction along the south project frontage. Parking is permitted along both sides of this roadway, within the vicinity of the project. The speed limit on Bishop Place is 25 miles per hour (mph).

Moran Street is a two-lane, undivided Residential Collector roadway oriented in the north-south direction along the west project frontage. Parking is permitted primarily along the east side of this roadway and the west side of Moran is primarily auto repair and retail uses with multiple driveways, within the vicinity of the project. The speed limit on Moran Street is 25 mph.

Bolsa Avenue is a major arterial roadway oriented in the east-west direction. In the vicinity of the project, Bolsa Avenue is a six-lane divided major arterial, providing three travel lanes in each direction. The eastbound and westbound travel lanes are separated by a striped median. This east-west arterial is designated as a Major Arterial on the County of Orange MPAH. Parking is not permitted along either side of this roadway. The posted speed limit on Bolsa Avenue within the vicinity of the project is 40 mph.



SOURCE: THOMAS BROS

SITE

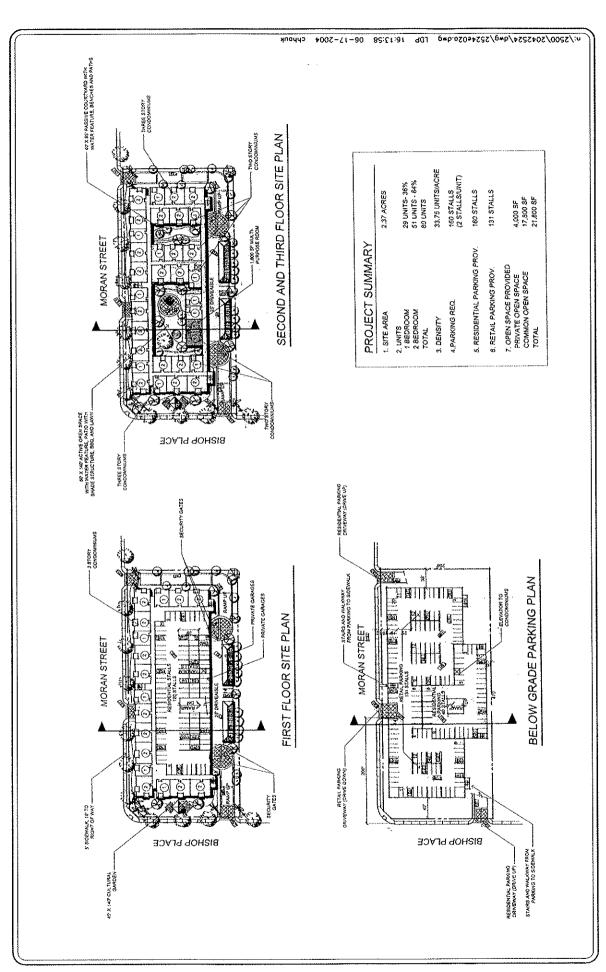
= PROJECT

EXHIBIT

VICINITY MAP

SENIOR HOUSING, WESTMINSTER **MESTMINSTER**

NO SCALE LINSCOTT LAW & GREENSPAN ENGINEERS



SOURCE: ARCHITECTS ORANGE

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WESTMINSTER SENIOR HOUSING, WESTMINSTER PROPOSED SITE PLAN

Exhibit 3 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. This exhibit identifies the number of travel lanes for key arterials, as well as intersection configurations and controls for the key area intersections neighboring the project site.

EXISTING AREA TRAFFIC VOLUMES

Existing AM and PM peak hour traffic volumes for the eight study intersections evaluated in this report were obtained from manual morning and evening peak hour turning movement counts, conducted by City Traffic Counters in January, 2004 during the Chinese New Year. **Exhibits 4** and **5** depict the existing AM and PM peak hour traffic volumes at the eight key intersections evaluated in this report, respectively. **Appendix A** contains the detailed manual turning movement count sheets for the eight key study intersections.

EXISTING INTERSECTION CONDITIONS

Level of Service Method of Analysis

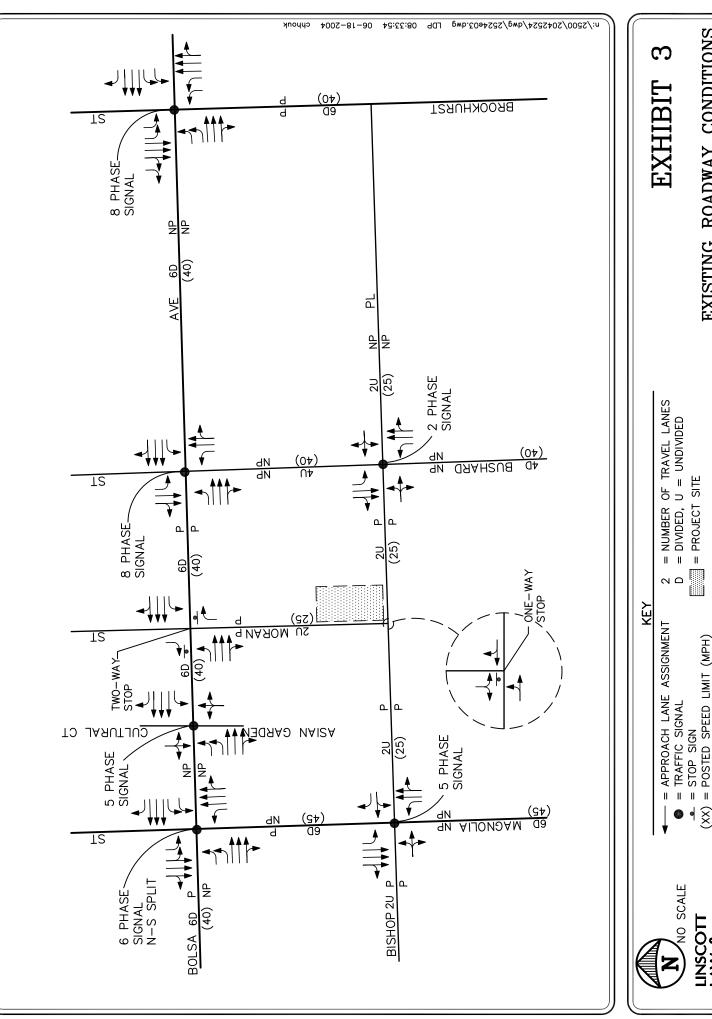
HCM Method of Analysis (Unsignalized Intersections)

In conformance with the City of Westminster requirements, existing AM and PM peak hour operating conditions for the eight key intersections were evaluated using the Highway Capacity Methodology (HCM) for unsignalized intersections. This methodology estimates the average total delay for each of the subject movements and determines the level of service for each movement. The overall average delay measured in seconds per vehicle, and level of service is then calculated for the entire intersection.

The HCM delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM delay value range, as shown in **Table 1**. Based on City criteria for unsignalized intersections, LOS D, which is an overall intersection delay of 35.0 seconds/vehicle or less, is the minimum acceptable intersection service level.

ICU Method of Analysis (Signalized Intersections)

Per the Orange County CMP requirements, the ICU calculations use a lane capacity of 1,700 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and a dual left-turn capacity of 3,400 vph. A clearance adjustment (lost time) factor of 5% (0.05) was added to each Level of Service calculation. The ICU value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The eight qualitative categories of Level of Service have been defined along with the corresponding ICU value range, as shown in **Table 2**.



EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

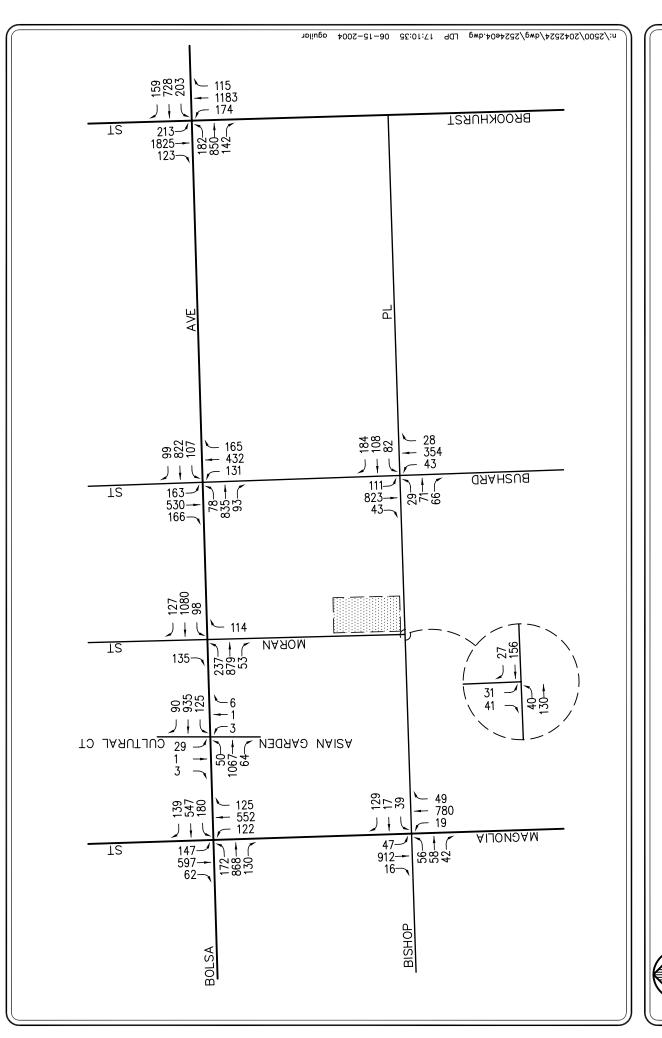
WESTMINSTER SENIOR HOUSING, WESTMINSTER

= NO PARKING

= PARKING

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LAW & GREENSPAN ENGINEERS



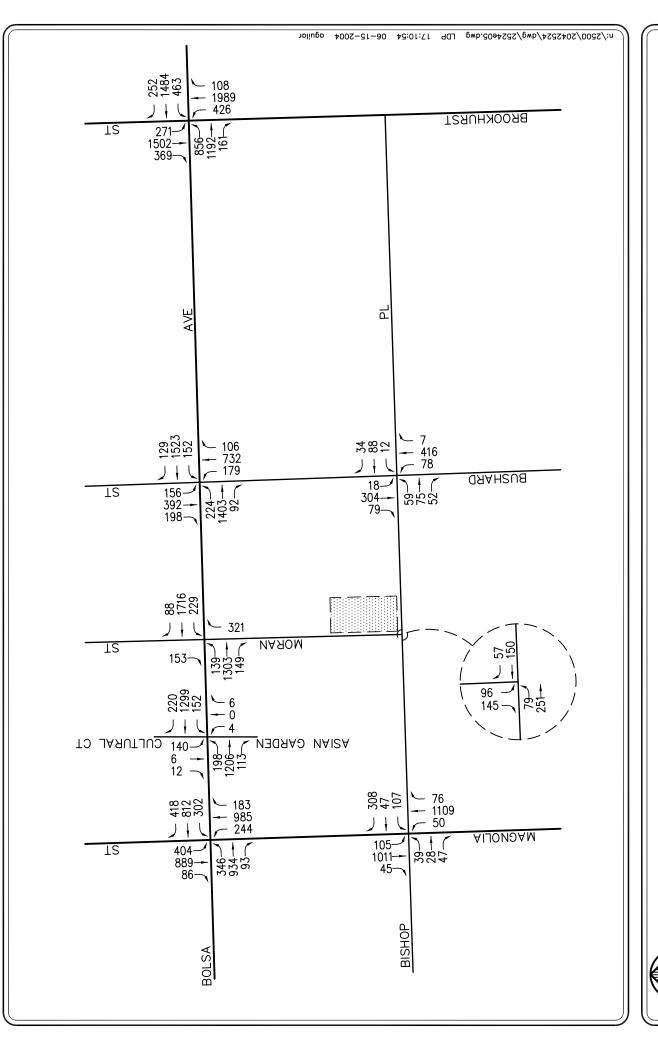


LINSCOTT LAW & GREENSPAN

ENGINEERS

EXISTING AM PEAK HOUR TRAFFIC VOLUMES

WESTMINSTER SENIOR HOUSING, WESTMINSTER





____ = PROJECT SITE

KΕΥ

EXISTING PM PEAK HOUR TRAFFIC VOLUMES WESTMINSTER SENIOR HOUSING, WESTMINSTER

LINSCOTT
LAW &
CREENSPAN
ENGINEERS

TABLE 1

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Westminster Senior Housing, Westminster

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
В	$> 10.0 \text{ and} \le 15.0$	Short traffic delays
С	$> 15.0 \text{ and} \le 25.0$	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
Е	$> 35.0 \text{ and} \le 50.0$	Very long traffic delays
F	> 50.0	Severe congestion

TABLE 2

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Westminster Senior Housing, Westminster

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	Level of Service Description		
A	0.00 - 0.60	Free Flow		
В	0.61 - 0.70	Rural Design		
С	0.71 - 0.80	Urban Design		
D	0.81 - 0.90	Maximum Urban Design		
Е	0.91 - 1.00	Capacity		
F	≥ 1.01	Forced Flow		

The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. According to City of Westminster criteria, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours.

Appendix B presents the HCM/LOS and ICU/LOS calculations at each of the eight (8) key intersections for the AM peak hour and PM peak hour.

Existing Level of Service Results

Table 3 summarizes the existing peak hour service level calculations for the eight study intersections based on existing traffic volumes and current street geometry. Review of Table 3 indicates that the study intersection of Brookhurst Street at Bolsa Avenue currently operates at adverse levels of service (LOS) F during the PM peak hour. The remaining seven key intersections currently operate at LOS D or better during the AM and PM peak hours. Please note that the traffic counts were conducted during the Chinese New Year celebration period and may overstate the typical weekday LOS at these study intersections.

TABLE 3

EXISTING PEAK HOUR LEVELS OF SERVICE SUMMARY¹

Westminster Senior Housing, Westminster

Ke	y Intersections	Time Period	City/Jurisdiction	Control Type	ICU/ Delay (sec/veh)	LOS
1.	Magnolia Street at	AM	City of	6∅ Traffic	0.587	A
	Bolsa Avenue	PM	Westminster	Signal	0.798	C
2.	Cultural Ct./Asian	AM	City of	5Ø Traffic	0.365	A
	Garden at Bolsa Ave.	PM	Westminster	Signal	0.491	A
3.	Moran Street at	AM	City of	2-Way	3.2 s/v	A
	Bolsa Avenue	PM	Westminster	Stop	5.6 s/v	A
4.	Bushard Street at	AM	City of	8Ø Traffic	0.577	A
	Bolsa Avenue	PM	Westminster	Signal	0.844	D
5.	Brookhurst Street at	AM	City of	8Ø Traffic	0.785	C
	Bolsa Avenue	PM	Westminster	Signal	1.084	F
6.	Magnolia Street at	AM	City of	5Ø Traffic	0.414	A
	Bishop Place	PM	Westminster	Signal	0.580	A
7.	Moran Street at	AM	City of	1-Way	2.6 s/v	A
	Bishop Place	PM	Westminster	Stop	5.8 s/v	A
8.	Bushard Street at	AM	City of	2Ø Traffic	0.550	A
	Bishop Place	PM	Westminster	Signal	0.318	A

-

Bold HCM/LOS values indicate adverse service levels based on City of Westminster LOS standards.

TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed development project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

PROJECT TRAFFIC CHARACTERISTICS

Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation factors and equations used in the traffic forecasting procedure are found in the Seventh Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2003].

Table 4 summarizes the trip generation rates used in forecasting the impact of the proposed Westminster Senior Housing project. Trips generated by the proposed project were estimated using ITE Land Use 252 (Senior Adult Housing - Attached) and ITE Land Use 820 (Shopping Center) rates. The commercial/retail square-footage for the project was developed as a function of the amount of retail parking spaces and the City parking code for commercial/retail uses. Based on the City parking code rate of four parking spaces per 1,000 SF of gross leasable area (GLA) for commercial/retail uses, the 131 retail parking spaces can support 32,750 SFGLA of retail use.

As shown in Table 4, the proposed project is expected to generate 1,543 daily trips with 40 trips (24 inbound, 16 outbound) in the AM peak hour and 66 trips (33 inbound, 33 outbound) in the PM peak hour.

TABLE 4

PROJECT TRAFFIC GENERATION FORECAST²
Westminster Senior Housing, Westminster

ITE Land Use Code /	Daily	AN	I Peak Ho	our	PM	I Peak Ho	our
Project Description	2-Way	In	Out	Total	In	Out	Total
Trip Generation Rates:							
• 252: Senior Adult Housing - Attached (TE/Occupied DU)	3.48	0.04	0.04	0.08	0.07	0.04	0.11
• 820: Shopping Center ³ (TE/1,000 SF)	42.94	0.63	0.40	1.03	1.80	1.95	3.75
Trip Generation Forecast:							
Westminster Senior Housing (80 DU)	278	3	3	6	6	3	9
Commercial Retail (32,750 SF)	1,406	21	13	34	59	64	123
Pass-by ⁴	<u>-141</u>	0	0	0	<u>-32</u>	-34	<u>-66</u>
Subtotal	1,265	21	13	34	27	30	57
Trip Generation Forecast	1,543	24	16	40	33	33	66

Note:

• TE/Occupied DU = Trip ends per occupied dwelling unit

Project Traffic Distribution and Assignment

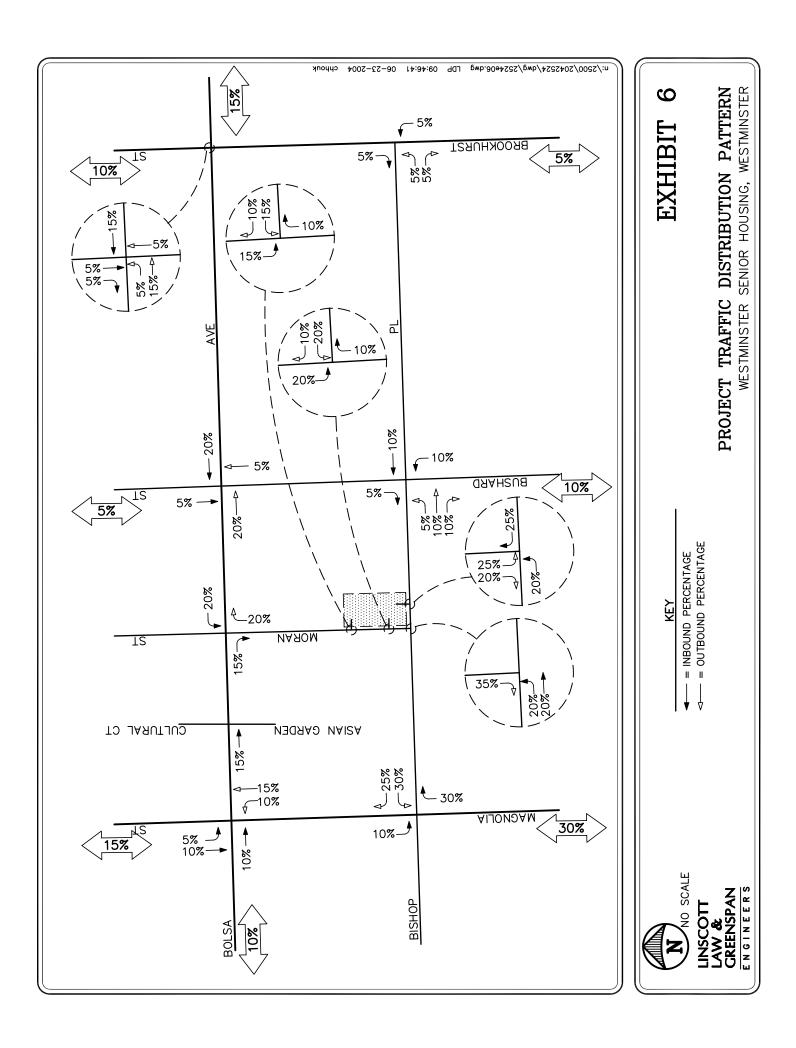
The traffic distribution pattern for the proposed project is presented in **Exhibit 6**. Project traffic volumes, both entering and exiting the site, have been distributed and assigned to the adjacent street system based on the following considerations: 1) the site's proximity to major traffic carriers (i.e. Bolsa Avenue, Brookhurst Street, and Magnolia Street, etc.); 2) expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals; and 3) ingress/egress availability at the project site.

Source: Trip Generation, 7th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2003).

The trip generation forecasts for shopping center are based on rates as listed above.

A pass-by reduction factor of 10% was used to estimate the pass-by trip reduction for Daily. The PM Peak Hour pass-by reduction is based on the following equation:

[•] PM Peak Hour: Ln(T) = -0.291 Ln(X) + 5.001 Ln = Natural logarithm, T = Average pass-by trip percentage, X = Area in 1,000 gross square feet of leasable area Source: *Trip Generation Handbook*, Institute of Transportation Engineers (ITE), Washington, D.C. (1998).



The anticipated AM and PM peak hour project traffic volumes associated with the proposed project are presented in **Exhibits 7** and **8**, respectively. The traffic volume assignments presented in Exhibits 7 and 8 reflect the traffic distribution characteristics illustrated in Exhibit 6 and the traffic generation forecast presented in Table 4.

BACKGROUND TRAFFIC CONDITIONS

Ambient and Cumulative Projects Traffic

Horizon year background traffic growth estimates have been calculated using ambient growth factors. The ambient growth factor is intended to include unknown and future related projects in the study area. It also accounts for regular growth in traffic volumes due to the development of projects outside the study area. For this traffic analysis, future growth in the traffic volumes at the study intersections has been calculated by incorporating a two percent (2%) annual ambient growth rate. The application of this growth rate to existing 2004 traffic volumes results in a two percent (2%) growth in existing volumes at the eight key intersections to horizon year 2005.

Information concerning cumulative projects (planned and/or approved) in the vicinity of the project has been researched at the City of Westminster. Based on our findings, there is one approved project within the project study area, to be completed in Year 2005 listed as follows:

• 13,300 SF two–story office/bank building on the southwest corner of Magnolia Avenue and Westminster Boulevard (8990 Westminster Boulevard: Case No. 2003-29)

As Alternative No. 1, which consists of both a bank and office building combined, this proposed cumulative project is expected to generate 1,004 daily trips (502 inbound, 502 outbound) with 45 trips (36 inbound, 9 outbound) in the AM peak hour and 262 trips (85 inbound, 177 outbound) in the PM peak hour.

Exhibits 9 and **10** present the AM and PM peak hour background traffic volumes (existing traffic + ambient growth traffic + cumulative project traffic) at the eight key intersections for Year 2005, respectively.

Exhibits 11 and **12** illustrate the year 2005 forecast AM and PM peak hour traffic volumes, respectively, with the inclusion of the trips generated by the proposed Westminster Senior Housing project.

TABLE 5

YEAR 2005 PEAK HOUR CAPACITY ANALYSIS SUMMARY⁵
Westminster Senior Housing, Westminster

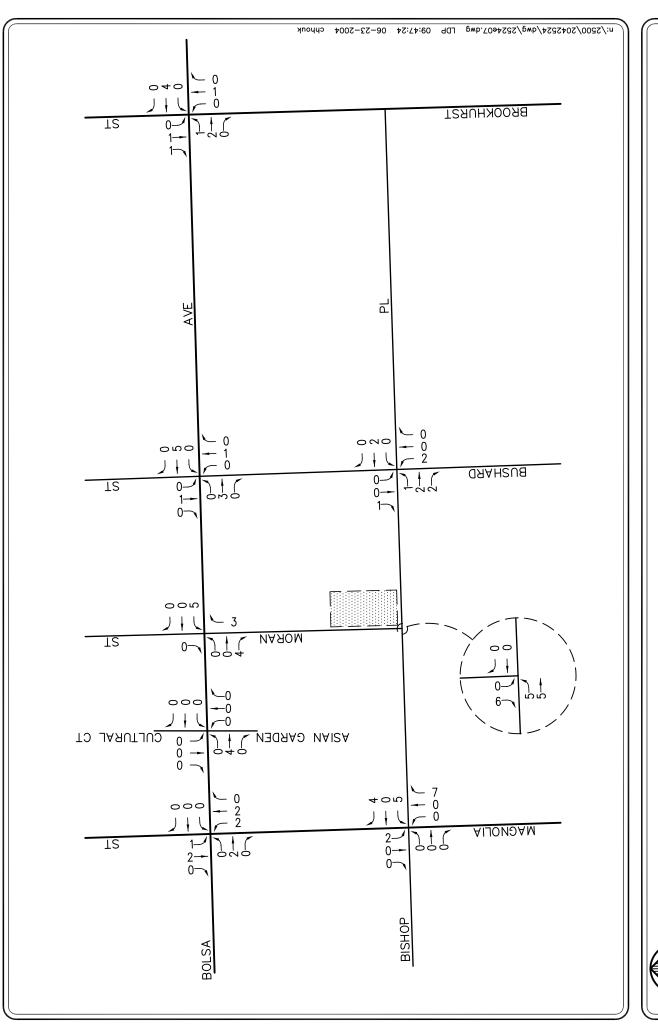
			(1) Year 20	004	(2) Year 20	005	(3) Year 20	005	(4)	
			Existin	_	Backgro		Backgro		Project Impa	
		Time	Conditi		Conditi		Plus Pro	ject	Significanc	e
Ke	y Intersections	Period	ICU/HCS	LOS	ICU/HCS	LOS	ICU/HCS	LOS	ICU/HCS Inc.	Y/N
1.	Magnolia Street at	AM	0.587	A	0.598	A	0.600	A	0.002	N
1.	Bolsa Avenue	PM	0.798	C	0.819	D	0.822	D	0.003	N
2.	Cultural Ct./Asian	AM	0.365	A	0.371	Α	0.372	A	0.001	N
۷.	Garden at Bolsa Ave.	PM	0.491	A	0.502	A	0.503	A	0.001	N
3.	Moran Street at	AM	3.2 s/v	A	0.443	Α	0.442	A	-0.001	N
٥.	Bolsa Avenue ⁶	PM	5.6 s/v	A	0.551	A	0.550	A	-0.001	N
4.	Bushard Street at	AM	0.577	A	0.588	A	0.588	A	0.000	N
4.	Bolsa Avenue	PM	0.844	D	0.860	D	0.863	D	0.003	N
5.	Brookhurst Street at	AM	0.785	C	0.799	C	0.800	C	0.001	N
٥.	Bolsa Avenue	PM	1.084	F	1.104	F	1.106	F	0.002	N
6.	Magnolia Street at	AM	0.414	A	0.422	A	0.425	A	0.003	N
0.	Bishop Place	PM	0.580	A	0.593	A	0.601	A	0.008	N
7.	Moran Street at	AM	2.6 s/v	A	2.6 s/v	A	2.8 s/v	A	0.2 s/v	N
/.	Bishop Place	PM	5.8 s/v	A	6.0 s/v	A	6.3 s/v	A	0.3 s/v	N
8.	Bushard Street at	AM	0.550	A	0.560	A	0.563	A	0.003	N
0.	Bishop Place	PM	0.318	A	0.325	A	0.331	A	0.006	N

Note:

• s/v = seconds per vehicle (delay)

⁵ **Bold HCM/LOS values** indicate adverse service levels based on City of Westminster LOS standards.

The intersection is currently unsignalized (i.e, Moran Street is stop-controlled and Bolsa Avenue is unimpeded). The intersection will be signalized by June 2004 and thus is analyzed as a signalized intersection in Year 2005 Background traffic conditions and thereafter.





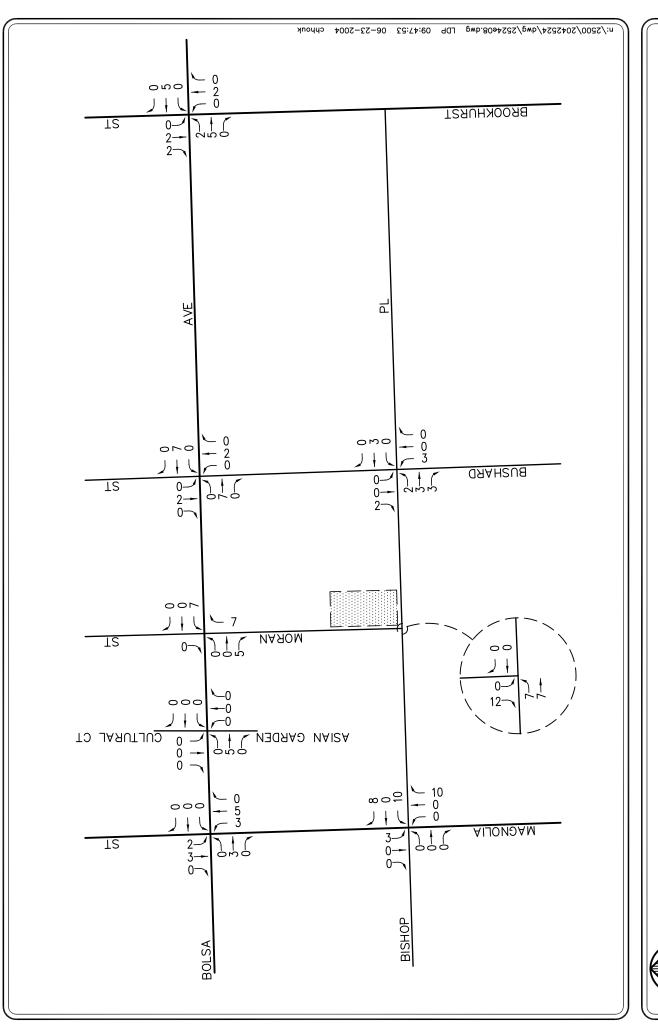
PROJECT SITE KΕΥ

LINSCOTT LAW & GREENSPAN

ENGINEERS

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

WESTMINSTER SENIOR HOUSING, WESTMINSTER



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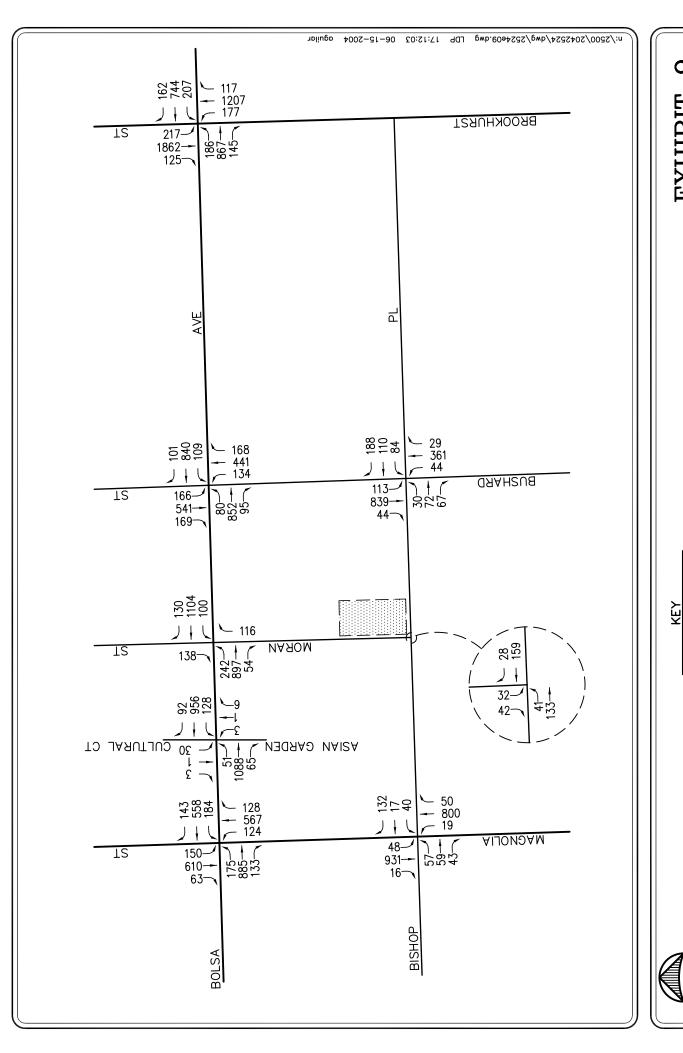
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ENGINEERS

PM PEAK HOUR PROJECT TRAFFIC VOLUMES

WESTMINSTER SENIOR HOUSING, WESTMINSTER





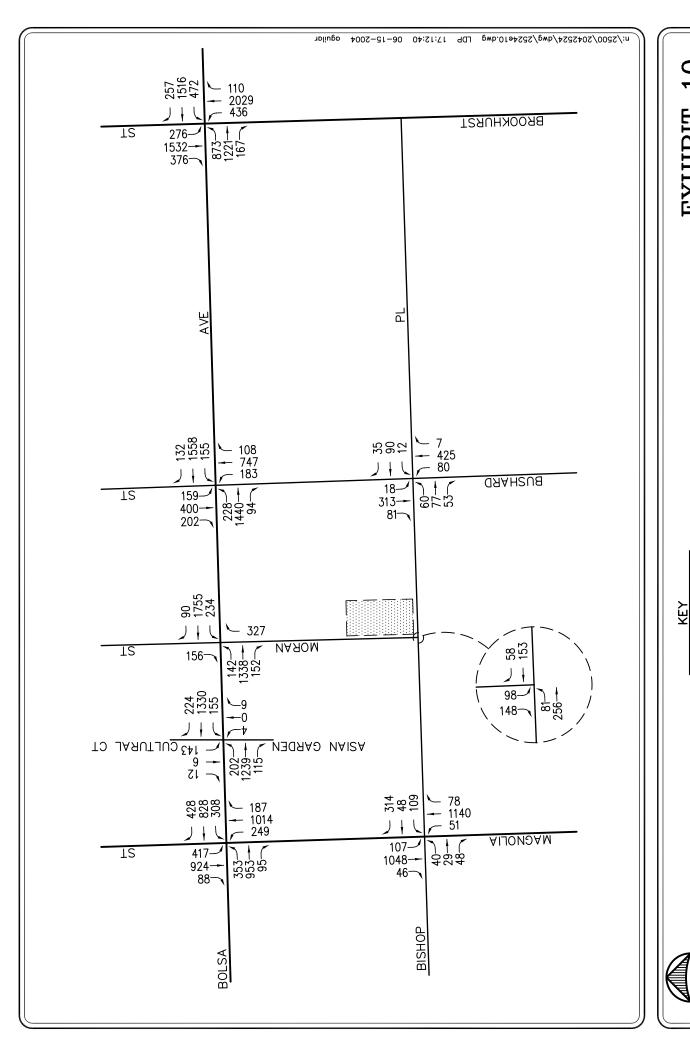
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ENGINEERS

YEAR 2005 AM PEAK HOUR BACKGROUND TRAFFIC VOLUMES

WESTMINSTER SENIOR HOUSING, WESTMINSTER



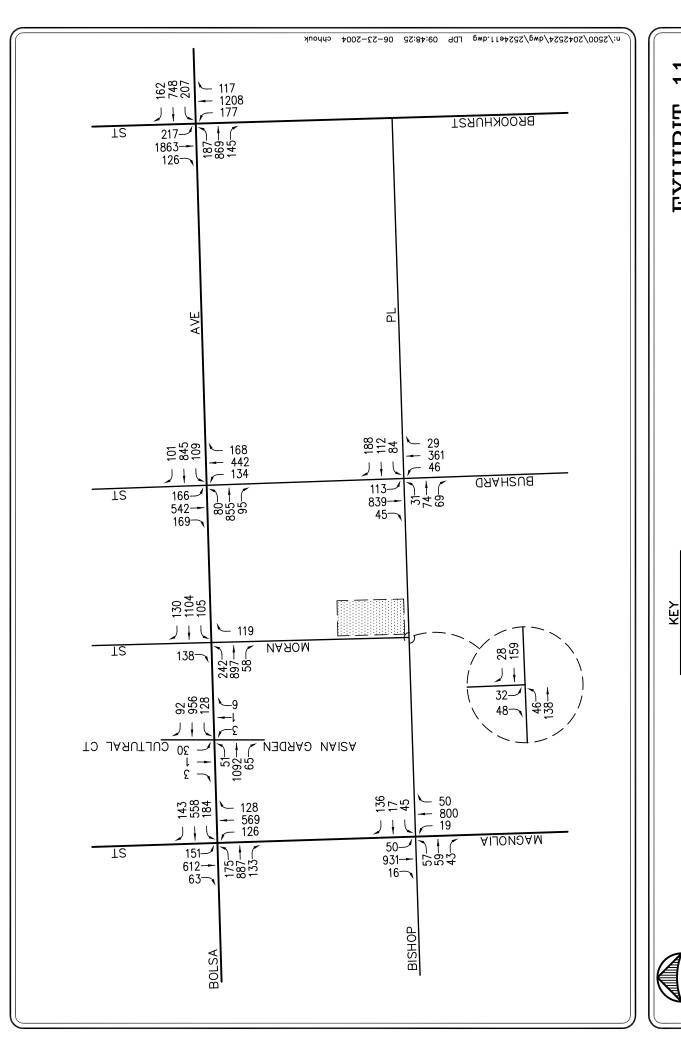


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YEAR 2005 AM PEAK HOUR TRAFFIC VOLUMES WITH PROJECT TRAFFIC

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TRAFFIC IMPACT ANALYSIS METHODOLOGY

Impact Criteria and Thresholds

The relative impact of the added project traffic volumes generated by the Westminster Senior Housing project during the AM and PM peak hours was evaluated based on the analysis of the future operating conditions at the eight key study intersections, without, then with, the proposed project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at each study intersection. The significance of the potential impacts of the project at each key intersection was then evaluated using the City's LOS standards and the Orange County CMP traffic impact criteria.

As indicated earlier, the City of Westminster considers LOS D (ICU = 0.805 - 0.904) to be the minimum acceptable condition that should be maintained during the peak commute hours. Consistent with the Orange County CMP criteria, the City identifies a significant project impact when the project traffic demand at a study intersection causes LOS E or F and/or increases the LOS by more than 1% of capacity (ICU > 0.010), worsening unacceptable LOS E or F conditions.

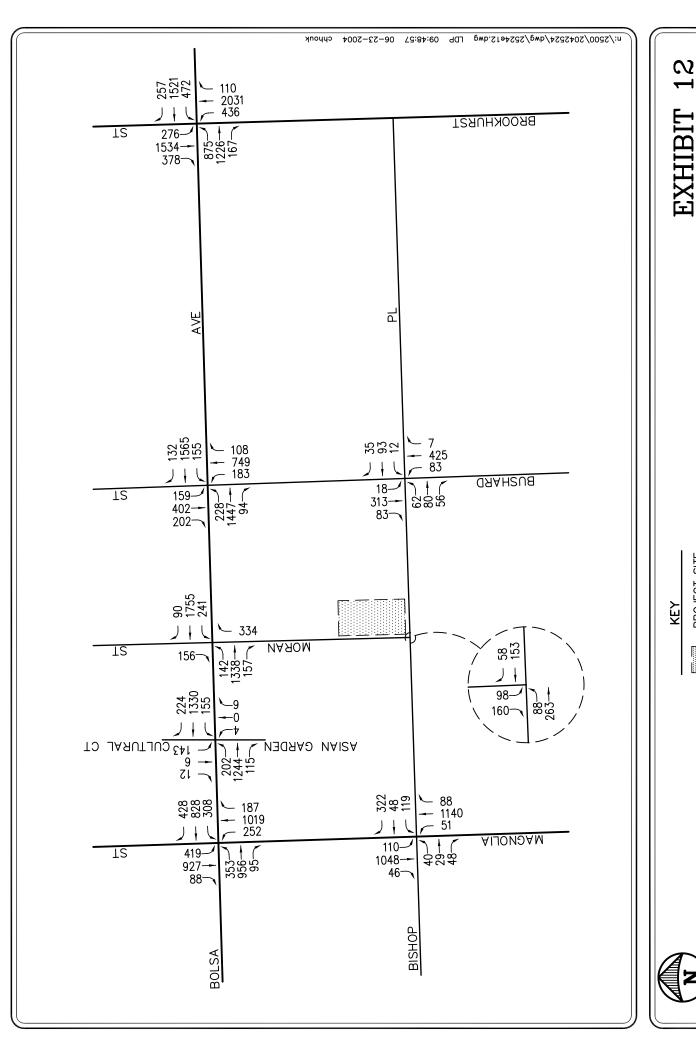
Traffic Impact Analysis Scenarios

The following scenarios are those for which LOS calculations have been performed:

- 1) 2004: Existing Traffic Conditions
- 2) 2005: Future Background (Existing plus Growth to horizon year 2005 at 2% per year plus Cumulative Projects)
- 3) 2005: Future Background Plus the Westminster Senior Housing project
- 4) Scenario (3) with Mitigation, if necessary

PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Table 5 summarizes the peak hour Level of Service results at the eight study intersections for the Year 2005 horizon year. The first column (1) of ICU/LOS values in Table 5 presents a summary of existing AM/PM peak hour traffic conditions (which were also presented in Table 3). The second column (2) lists future Year 2005 background traffic conditions (ambient growth traffic plus cumulative projects traffic) based on existing intersection geometry, but without any traffic generated from the proposed project. The third column (3) presents future forecast traffic conditions with the addition of traffic generated by the proposed project development. The fourth column (4) shows the increase in ICU value due to the added peak hour project trips and indicates whether the traffic associated with the project will have a significant impact based on significance criteria of the City of Westminster.





TRAFFIC VOLUMES PROJECT TRAFFIC YEAR 2005 PM PEAK HOUR WITH

SENIOR HOUSING, WESTMINSTER WESTMINSTER

LINSCOTT LAW & GREENSPAN

PROJECT SITE

ENGINEERS

2004 Existing Conditions

As previously presented in Table 3, review of this table indicates that the study intersection of Brookhurst Street at Bolsa Avenue currently operates at adverse levels of service (LOS) F during the PM peak hour. The remaining seven key intersections currently operate at LOS D or better during the AM and PM peak hours.

Year 2005 Future Background Traffic Condition

An analysis of future (Year 2005) background traffic conditions indicates that ambient traffic growth and cumulative projects traffic will cause the study intersection of Brookhurst Street at Bolsa Avenue to continue to operate at an adverse level of service. The remaining seven key intersections will continue to operate at LOS D or better during the AM and PM peak hours.

Year 2005 Background Condition With Project Traffic

Review of Columns 3 and 4 of Table 5 indicates that the study intersection of Brookhurst Street at Bolsa Avenue will continue to operate at an adverse level of service during the PM peak hour with the addition of project traffic. The remaining seven key intersections will continue to operate at LOS D or better during the AM and PM peak hours. However, the proposed Westminster Senior Housing project *will not* significantly impact any of the eight key study intersections, when compared to the City of Westminster significant traffic impact criteria.

SITE ACCESS AND INTERNAL CIRCULATION EVALUATION

Project Access Opportunities and Constraints

Access to the proposed Westminster Senior Housing project will be provided via three access driveways (one full-movement driveway on Bishop Place and two full-movement driveway on Moran Street). Based on our evaluation the anticipated operations at the three project driveways, project access opportunities will be adequate. However, in order to provide adequate sight distance at the project driveways, it is recommended that the landscaping be maintained to a maximum height of 18 inches above the sidewalk elevation within 50 feet of both driveways.

As a result, no additional improvements are required or recommended along Bishop Place and Moran Street to improve access opportunities.

Internal Circulation

Based on the anticipated project traffic volumes, the project driveways will be able to accommodate ingress and egress traffic without undue congestion. The proposed throat lengths on each of the parking access ramps at each project driveway are sufficient. Further, the on-site circulation layout and loading areas of the proposed project, on an overall basis, are adequate.

Gate Queuing Evaluation for Retail Parking Area

Based on our queuing evaluation for the proposed gated entry into the retail parking area, it is recommended that the gate be located a minimum of 20 feet beyond the back of sidewalk in order to accommodate a storage length of one vehicle.

CONGESTION MANAGEMENT PROGRAM (CMP) ANALYSIS

This section presents the Congestion Management Program (CMP) traffic analysis. The analysis is consistent with the requirements and procedures outlined in the current *Orange County Congestion Management Program (CMP)*. The CMP requires that a traffic impact analysis be conducted for any project generating 2,400 or more daily trips, or 1,600 or more daily trips for projects that directly access the CMP Highway System (HS). Per the CMP guidelines, this number is based on the desire to analyze any impacts that will be 3% or more of the existing CMP highway system facilities' capacity.

As noted in the Westminster Senior Housing traffic study, the proposed project is projected to generate approximately 1,543 daily trip-ends, and thus does <u>not</u> meet the criteria requiring a CMP TIA. Hence, it is concluded that the Westminster Senior Housing project will not have any significant traffic impact on the Congestion Management Program Highway System.

PARKING DEMAND ANALYSIS

As presented on the site plan in Exhibit 2, the Westminster Senior Housing project is proposing to provide 160 resident/guest parking spaces on site within the two levels of parking below the building. The City of Westminster Zoning Code currently does not have a parking standard for senior housing developments. Therefore, based on the parking ratio approved by the City for other recent senior housing developments, one parking stall per bedroom has been recommended by the City, which would require 133 parking spaces (51 x 2 bedrooms plus 29 x 1 bedroom). As a result, adequate parking is provided the Westminster Senior Housing project and a parking surplus of 27 parking spaces is provided.

CONCLUSIONS

- The analysis investigated the relative traffic impacts of the proposed Westminster Senior Housing project for a near-term (Year 2005) horizon year at the following study intersections:
 - 1. Magnolia Street @ Bolsa Avenue (signalized)
 - 2. Cultural Court/Asian Garden @ Bolsa Avenue (signalized)
 - 3. Moran Street @ Bolsa Avenue (stop-controlled NB & SB)
 - 4. Bushard Street @ Bolsa Avenue (signalized)
 - 5. Brookhurst Street @ Bolsa Avenue (signalized)
 - 6. Magnolia Street @ Bishop Place (signalized)
 - 7. Moran Street @ Bishop Place (stop-controlled SB)
 - 8. Bushard Street @ Bishop Place (signalized)
- The proposed project is forecast to generate 1,534 new daily trips, 40 new trips during the AM peak hour and 66 new trips during the PM peak hour.
- Based on existing traffic counts, current intersection geometrics, ambient traffic growth, cumulative projects traffic and anticipated project traffic volumes, the Westminster Senior Housing project will not have a significant impact on any of the eight key study intersections, when compared to the City of Westminster significant traffic impact criteria.
- Access to the proposed Westminster Senior Housing project will be provided via three access
 driveways. Based on our evaluation the anticipated operations at the three project driveways,
 project access opportunities will be adequate. However, in order to provide adequate sight
 distance at the project driveways, it is recommended that the landscaping be maintained to a
 maximum height of 18 inches above the sidewalk elevation within 50 feet of both driveways.
- Based on the anticipated project traffic volumes, the project driveways will be able to accommodate ingress and egress traffic without undue congestion. The proposed throat lengths at each project driveway are sufficient and the on-site circulation layout as well as the loading areas of the proposed project, on an overall basis, are adequate
- Based on our evaluation of the Orange County Congestion Management Program (CMP) requirements, it is concluded that the Westminster Senior Housing project will not have any significant traffic impact on the Congestion Management Program Highway System.
- Based on the parking ratio approved by the City for other recent senior housing developments, which requires 133 parking spaces, the 160 proposed resident/guest parking spaces are adequate to support the Westminster Senior Housing project with a parking surplus of 27 parking spaces.



Memorandum

Date: August 6, 2004

To: Jake Q. Ngo, Associate Civil Engineer/Engineering Division

From: Alice Houseworth, Project Manager

Subject: City of Westminster – Moran Senior Condominium – Alternative Design, Revised

Traffic Analysis

This memo presents the traffic impact analysis for increasing the Moran Senior Condominium Project retail paid parking spaces. Please review the analysis as soon as possible and let me know if you have any revisions or concerns.

The original Moran/Bishop Senior Housing Complex Project (February 2004) proposed 80 senior apartment units with 87 residential parking spaces. A Traffic Impact Analysis Report (February 2004) was produced for that project. The revised Moran/Bishop Senior Housing Complex (renamed Moran Senior Condominium Project) (June 2004) proposed 80 senior condominium units with 160 residential/guest parking spaces and 131 retail paid parking spaces. The Updated Traffic Impact Analysis Report (June 2004) was produced for that project. The project applicant has proposed a potential Alternative Development Scenario for the revised project. This alternative proposes moving 16 condominium units on Level 1 to Level 4, to allow for the provision of approximately 80 or more additional parking stalls to be used by retail customers and employees of the shops located in the nearby Asian Garden Mall.

The analysis in this memo shows that the Alternative Development Scenario (August 2004) would not have a significant impact at any of the study intersections and would not exceed the minimum evaluation threshold for the Congestion Management Program (CMP) Highway System.

The CMP guidelines require a traffic impact analysis when a project generates 2,400 or more daily trips, or 1,600 or more daily trips for projects that directly access the CMP highway System. Based on the Moran Senior Condominium Project generating 1,543 daily trips, the Alternative Development Scenario could generate an additional 851 daily trips and remain below the 2,400 threshold. This equates to 88 additional retail parking spaces (219 total retail parking spaces).

Table 1 shows the Alternative Development Scenario trip generation for 80 senior housing units with 160 residential/guest parking spaces and 219 retail paid parking spaces. With the additional parking spaces, the Alternative Development Scenario will generate 2,394 daily trips with 62

trips (37 inbound, 25 outbound) in the AM Peak Hour and 119 trips (59 inbound, 60 outbound) in the PM Peak Hour.

Table 1. Project Generation Trips¹ – 219 Retail Parking Spaces

ITE Land Use Code /	Daily	AN	I Peak Ho	ur	PM	I Peak Hou	ur
Project Description	2-Way	In	Out	Total	In	Out	Total
Trip Generation Rates:							
• 252: Senior Adult Housing - Attached (TE/Occupied DU2)	3.48	0.04	0.04	0.08	0.07	0.04	0.11
• 820: Shopping Center3 (TE/1,000 SF)	42.94	0.63	0.40	1.03	1.80	1.95	3.75
Trip Generation Forecast:							
• Westminster Senior Housing (80 DU)	278	3	3	6	6	3	9
• Commercial Retail (54,750 SF)	2,351	34	22	56	99	107	206
Pass-by ⁴	<u>-235</u>	<u>-0</u>	<u>-0</u>	<u>-0</u>	<u>-46</u>	<u>-50</u>	<u>-96</u>
Subtotal	2,116	34	22	56	53	57	110
Trip Generation Forecast	2,394	37	25	62	59	60	119

Source: *Trip Generation*, 7th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2003).

PM Peak Hour: Ln(T) = -0.291 Ln(X) + 5.001

Ln = Natural logarithm, T = Average pass-by trip percentage, X = Area in 1,000 gross square feet of leasable area

Source: Trip Generation Handbook, Institute of Transportation Engineers (ITE), Washington, D.C. (1998).

As indicated in the Traffic Impact Analysis Report (February 2004) and the Update (June 2004), the City of Westminster intersection LOS standard is LOS D (ICU = 0.805 - 0.904) for the peak commute hours. The City identifies a significant project impact when the project traffic demand at a study intersection causes LOS E or F and/or increases the LOS by more than 1% of capacity (ICU > 0.010), worsening unacceptable LOS E or F conditions.

Table 2 summarizes the capacity analysis at the eight study intersections for the 2005 background conditions and with a proposed additional 88 retail paid parking spaces. Under the 2005 background conditions, most intersections will operate at LOS D or better during the AM and PM Peak Hours, except for the intersection of Brookhurst Street and Bolsa Avenue, which will operate at an adverse level of service during the PM Peak Hour. Under the 2005 with Alternative Development Scenario, the intersection of Brookhurst Street at Bolsa Avenue will continue to operate at an adverse level of service during the PM Peak Hour with the addition of project traffic. The ICU value will decline by 0.4%, which is less then the maximum allowable

² TE/Occupied DU = Trip ends per occupied dwelling unit

³ The trip generation forecasts for shopping center are based on rates as listed above.

⁴ A pass-by reduction factor of 10% was used to estimate the pass-by trip reduction for Daily. The PM Peak Hour pass-by reduction is based on the following equation:

value of 1%. The remaining intersections will continue to operate at LOS D or better during the AM and PM Peak Hours.

Table 2. 2005 Peak Hour Capacity Analysis Summary¹

			Year 20 Backgro Condition	und	Backgrou	Year 2005 Background Plus Project		pact/
		Time	Condition	OIIS	(219 Retail Park	•		
Ke	y Intersections	Period	ICU/HCS	LOS	ICU/HCS	LOS	ICU/HCS Increase	Y/N
	Magnolia Street at	AM	0.598	A	0.601	A	0.003	N
1.	Bolsa Avenue	PM	0.819	D	0.824	D	0.005	N
2	Cultural Ct./Asian	AM	0.371	A	0.373	A	0.002	N
2.	2. Garden at Bolsa Ave.	PM	0.502	A	0.504	A	0.002	N
2	Moran Street at	AM	0.443	A	0.442	A	-0.001	N
3.	Bolsa Avenue ²	PM	0.551	A	0.554	A	0.003	N
4	Bushard Street at	AM	0.588	A	0.589	A	0.001	N
4.	Bolsa Avenue	PM	0.860	D	0.864	D	0.004	N
_	Brookhurst Street at	AM	0.799	C	0.801	C	0.002	N
5.	Bolsa Avenue	PM	1.104	F	1.108	F	0.004	N
_	Magnolia Street at	AM	0.422	A	0.427	A	0.005	N
6.	Bishop Place	PM	0.593	A	0.608	В	0.015	N
7	Moran Street at	AM	2.6 s/v^3	A	2.9 s/v	A	0.3 s/v	N
7.	Bishop Place	PM	6.0 s/v	A	6.5 s/v	A	0.5 s/v	N
0	Bushard Street at	AM	0.560	A	0.565	A	0.005	N
8.	Bishop Place	PM	0.325	A	0.338	A	0.013	N

¹ **Bold HCM/LOS values** indicate adverse service levels based on City of Westminster LOS standards.

Based on this analysis, the Alternative Development Scenario could add a maximum of 88 retail paid parking spaces. It would not have a significant impact on the City of Westminster street system or require an evaluation under the CMP Highway System guidelines.

² The intersection is currently unsignalized (i.e, Moran Street is stop-controlled and Bolsa Avenue is unimpeded). The intersection will be signalized by August 2004 and thus is analyzed as a signalized intersection in Year 2005 Background traffic conditions and thereafter.

 $^{^{3}}$ s/v = seconds per vehicle (delay)

Appendix B Geotechnical Investigation



Appendix

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The Planning Center April 2010



Geotechnical Investigation

Proposed Asian Garden Development 15100± South Moran Street Westminister, California

Report No. 1951-1 has been prepared for:

Asian Garden, Ltd. II

8907 Warner Avenue, Suite 108, Huntington Beach, California 92647

August 11, 2003

Thomas C. Benson, Jr., G.E. 2097 Vice President

> No. 2091 P Exp. 3/31/05

E OF CALL

Mountain View

Fairfield

Oakland

San Ramon

Fullerton

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GEOTECHNICAL INVESTIGATION PROPOSED ASIAN GARDEN DEVELOPMENT WESTMINISTER, CALIFORNIA

1.0 INTRODUCTION

In this report we present the results of our geotechnical investigation for the proposed Asian Garden development to be constructed in Westminister, California, as shown on the *Vicinity Map*, Figure 1. The purposes of our investigation were to (1) evaluate subsurface conditions at the site, and (2) to provide geotechnical recommendations for design of the proposed Asian Garden parking lot and future building.

1.1 Project Description

Our understanding of this project is based on our brief discussion with Joe Hartge at BV Engineering and the parcel map he provided. As shown on Figure 2, Site Plan, this site is located on the east side of Moran Street, north of Bishop Place, in Westminster. The site and region are relatively flat, and are currently undeveloped, open lots, consisting of Lots 13 through 21 of Tract 4249. Each lot has rectangular plan dimensions of 100 feet north-south We understand that you will initially be by approximately 206 feet. constructing an asphalt parking lot at grade on the northern Lots 18 through 21, and later be constructing a two-story wood frame building on Lots 13 through 17, with the building footprint covering these southern lots. The atgrade asphalt parking lot will solely be for autos. For the apartment or office building, we assume there will be a concrete slab-on-grade, with wood frame bearing wall loads on the order of 3 to 6 kips-per-foot, and a maximum column loads on the order of 300 kips or less. We expect finish grades to be within a foot or two of existing grades.

1.2 Scope of Services

Our scope of services was presented in detail in our Agreement with you dated June 24, 2003, authorized on July 1, 2003. To accomplish this work, we have provided the following services:

▼ Nine test pits were excavated to depths ranging from 6½ feet to 10½ feet and four Cone Penetrometer Tests (CPTs) were extended to depths of 50



feet. Relatively undisturbed earth material samples were retrieved for classification and geotechnical laboratory testing. A description of our field exploration and logs are presented in Appendix A, "Field Exploration."

- ▼ Physical and engineering properties of the subsurface soils were determined by visually classifying the samples and performing various geotechnical laboratory tests on selected samples in our Fullerton laboratory. A description of the tests and results are presented in Appendix B, "Geotechnical Laboratory Testing."
- ▼ A liquefaction evaluation was performed, and results are provided in Appendix C, *Liquefaction Evaluation*. Geotechnical engineering analyses were performed to develop recommendations for site earthwork, building foundations, slabs-on-grade and pavements.
- ▼ This report was prepared as a summary of our findings and to present our conclusions and recommendations.

Environmental services were not included as part of this study. This report was prepared for the sole use of Asian Garden, Ltd. II for application to the design of the proposed Asian Garden development parking lot and building in accordance with generally accepted geotechnical engineering practices at this time in Southern California. No warranty is expressed or implied.

2.0 SITE CONDITIONS

2.1 Surface

A brief surface reconnaissance was performed during our site exploration. As shown on Figure 2, the site is located on the northeast corner of the intersection of Moran Street and Bishop Place, in Westminster. This site and region were relatively flat, at approximately 42 feet above mean sea level, sloping very gently down to the southwest. This site is undeveloped, with a 2-inch thick gravel layer at the surface of the northern portion of the site (proposed parking lot), and primarily silt fill exposed at the southern portion of the site. The site is surrounding by industrial and commercial buildings to the west, a fire station to the north and a trailer park to the east. There are residences south of Bishop Place.

2.2 Subsurface

Penetrated at the surface in our test pits TP-1 through TP-4, and TP-9, at the proposed parking lot, and in TP-8 at the proposed building footprint, was 2- to



3-inches of gravel at the surface. Fill soils were encountered in all of our test pits to depths ranging from 1 foot to $3\frac{1}{2}$ feet. Encountered fill consisted of stiff to very stiff silt to loose silty sands. We are unaware of any fill compaction documentation for this site. Fill depths are summarized below:

Table 1. Depth of Fill

Test Pit	Location	Surface Elevation	Bottom o	f Fill (feet)	Depth Of
rest Fit	Location	(feet)*	Depth	Elevation	Test Pit (feet)
TP-1		44	1	43	
TP-2] , [45	1	44	61/2
TP-3	Proposed Parking Lot	43	21/2	401/2	8
TP-4	Tarking Lot	42	21/2	391/2	
TP-9		42	11/2	401/2	61/2
TP-5		43	2	41	9
TP-6	Proposed	43	2	41	101/2
TP-7	Two-Story - Building	43	31/2	391/2	
TP-8		43	2	41	91/2

^{*} Provided by BV Engineering

An ASTM D 1557-00 laboratory maximum density curve was performed using a bulk soil sample of the fill from TP-7 (see Appendix B). This laboratory maximum density was then used to calculate the relative compaction of the fill, based on a relatively undisturbed drive sample calculated in-situ density. It should be noted that drive-sampling could disturb soils, which can result in erroneously low densities and calculated relative compactions. However, the tested fill soil in TP-7 was considered to not be properly compacted (at 81 percent of the ASTM D 1557-00 laboratory maximum density). As depicted on the Consolidation Test figure in Appendix B, the tested fill soil was moisture sensitive and relatively compressible.

Below the fill soils to the depths explored, native alluvial soils encountered in the CPTs and test pits consisted of interbeded loose to medium dense silty sands to sands, interbeded with stiff to very stiff silt to medium stiff to stiff clay at greater depths. Shallow samples from the test pits (TP-7) in the depth range of $3\frac{1}{2}$ to 10 feet were significantly less compressible than the existing overlying fill soils. These shallow native soils (TP-3 at 1 to 5 feet) also had an R-value of 45. However, there were lenses of silty sands to sandy silts, often at depths of 20- to 25-feet, with correlated N-values detected by the CPT to be as low as 11.



2.3 Groundwater

Free groundwater was encountered during excavation in the deeper test pits TP-3 through TP-9, at depths ranging from 6 to 9 feet below existing grade, as listed in Table 2, below. All test pits were backfilled immediately after excavation. The California Division of Mines and Geology (CDMG, recently renamed California Geological Survey) Seismic Hazard Zone Report 003, 1997 (revised 2001), has estimated (based on historic groundwater data) that groundwater could rise to less than 5 feet below the surface at this site, during high groundwater fluctuations. Fluctuations in the level of the groundwater may occur due to variations in rainfall and other factors not in evidence at the time measurements were made.

Test Pit	Location	Date Drilled	Surface Elevation		undwater eet)	Depth Of Test pit
		Drillea	(feet)*	Depth	Elevation	(feet)
TP-1		- 37100	44	>61/2	-N.E*	
TP-2	Proposed		45	>61/2	-N.E*	61/2
TP-3	Parking	m	43	8	35	8
TP-4	Lot	2003	42	6	36	2000
TP-9			42	61/2	351/2	61/2
TP-5		July 11,	43	9	34	9
TP-6	Proposed Two Stone	٦٢	43	9	34	101/2
TP-7	Two-Story Building		43	8	35	
TP-8			43	8	35	91/2

Table 2. Depth to Groundwater

3.0 GEOLOGIC HAZARDS

A brief qualitative evaluation of the geologic hazards was made during this investigation. Our comments concerning these hazards are presented below.

3.1 Fault Rupture Hazard

A regional fault map illustrating known active faults relative to the site is presented in Figure 3, *Regional Fault Map*. The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone (known formerly as a Special Studies Zone). As shown on Figure 3, no known surface expression of active faults is believed to exist within the site. Fault rupture through the site, therefore, is not anticipated.



N.E.=groundwater not encountered

^{*} Provided by BV Engineering

3.2 Ground Shaking

Strong ground shaking can be expected at the site during moderate to severe earthquakes in the general region. This is common to virtually all of Southern California. The California Division of Mines and Geology (CDMG) has recently issued maps locating "Active Fault Near-Source Zones" to be used with the 1997 Uniform Building Code ("Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada," CDMG/ICBO February 1998). Faults are classified as either "A," "B," or "C" as shown below. Only faults classified as "A" or "B" are mapped since faults classified as "C" do not increase the near-source factor.

Table 3. Seismic Source Definitions

Seismic		Seismic Source Definition*		
Source Type	Seismic Source Description	Max. Moment Magnitude (M)	Slip Rate (mm/year)	
Α	Faults that are capable of producing large magnitude events and that have a high rate of seismic activity.	M≥7.0	≥5	
В	All faults other than Types A and C.	M≥7.0 M<7.0 M≥6.5	<5 >2 <2	
С	Faults that are not capable of producing large magnitude earthquakes and that have a relatively low rate of seismic activity.	M<6.5	≤2	

*Note: Both maximum moment magnitude and slip rate conditions must be satisfied concurrently when determining seismic source type. **Reference:** Table 16-U of the 2001 California Building Code (CBC).

As depicted on Figure 3, there are no currently identified Type A faults within 25 kilometers of the site. The following table lists Type B faults within 25 kilometers of the site:

Table 4. Distance to Seismic Sources

Fault	Seismic Source Type	Closest Distance (kilometers)
Newport-Inglewood*	D	8
Palos Verdes	D	22

^{*} Nearest Type B fault

Based on our test pits and CPTs, the site is underlain by loose to dense sands to silty sand ($N\geq15$ predominantly) and medium stiff to very stiff silt to clay extending to depths greater than 50 feet below the ground surface. With the information from Table 4 regarding local seismic sources, the site may be characterized for design based on Chapter 16 of the 1997 Uniform Building



Code (UBC) and the 2001 California Building Code (CBC) using the information in Table 5 below.

Categorization/Coefficient	Design Value
Soil Profile Type (Table 16-J)	S _D
Seismic Zone (Figure 16-2)	4
Seismic Zone Factor (Table 16-I)	0.4
Seismic Source Name	Newport-Inglewood
Seismic Source Type (Table 16-U)	В
Distance to Seismic Source (kilometers)	8
Near Source Factor Na (Table 16-S)	1.00
Near Source Factor N _v (Table 16-T)	1.08
Seismic Coefficient Ca (Table 16-Q)	0.44
Seismic Coefficient C _V (Table 16-R)	0.69

Table 5. 1997 UBC Site Categorization and Site Coefficients

3.3 Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. As shown on the April 17, 1997 Official Revised Map of Seismic Hazard Zones for the Newport Beach Quadrangle, the site is within a mapped potential liquefaction hazard zone. Therefore, a liquefaction evaluation for this project is prudent.

Our liquefaction evaluation calculations are presented in Appendix C, based primarily on the CPT data included in Appendix A. Liquefaction was predicted to occur in all four CPTs due to a large magnitude local earthquake, creating a peak horizontal ground acceleration on the order of 0.4 g. Although damaging liquefaction is predicted to occur at the site due to a large magnitude earthquake, the probability of liquefaction causing structural collapse for a two-story wood frame building with shallow foundations is judged to be low. This liquefaction hazard can also be mitigated with the use of driven piles, as discussed later in this report. The components of this liquefaction evaluation are discussed below:

▼ Groundwater: Groundwater was encountered in our test pits TP-3 to TP-9 at depths ranging from 6 to 9 feet below the surface. Further, CDMG (SHZR 003, revised 2001) has estimated (based on historic groundwater data) that groundwater could be shallower than 5 feet below the surface at this site. Therefore, we performed a site-specific liquefaction evaluation based on the assumption that groundwater could rise to within 5 feet of



the ground surface. This is an adverse condition with respect to liquefaction, but exists throughout Westminster.

- ▼ Soil Types: A wide range of finer alluvium consisting of fine silty sands to silt interbeded with clay layers were encountered at depth greater than 5 feet in all of our test pits and CPTs. The fine grain sand lenses were found to be susceptible to liquefaction, as listed in Appendix C, in lenses within the depth ranging from 8 to 49 feet.
- ▼ Estimated Settlements: As shown in Appendix C, estimated settlements induced by liquefaction resulting from a large magnitude earthquake at the site, range from approximately ¾ to 1¾-inch, as summarized in Table 6, below:

Location	CPT Number	Estimated Liquefaction-Induced Settlement (inches)
Secretary and respect to the second secretary and the second seco	CPT-1	0.8
Proposed Two-Story Building	CPT-2	1.6
	CPT-3	1.6
	CPT-4	1.8

Table 6. Result of Settlement Analysis by Liquefaction

As noted, the maximum calculated differential settlement induced by liquefaction was on the order of ¾-inch.

▼ Surface Manifestations: As also shown in Appendix C, thin layers of liquefaction are calculated to occur as shallow as 8 feet below the surface, but these lenses are only on the order of a foot thick or less. Thicker zones of potential liquefaction were identified at greater depths (>20 feet). Therefore, based on Ishihara (1985), there would be "no surface manifestation" as a result of this extreme worst-case scenario liquefaction.

3.4 Differential Compaction

If near-surface soils vary in composition both vertically and laterally, strong earthquake shaking can cause non-uniform compaction of the soil strata, resulting in movement of the near-surface soils. In our opinion, if the existing shallow loose fill is recompacted as we recommend in this report, and because the subsurface soils encountered at the site are generally uniform alluvium and do not appear to change in thickness or consistency abruptly over short distances, we judge the probability of differential compaction at the site to be low.



3.5 Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "free" face such as an open body of water, channel, or excavation. Generally in soils, this movement is due to failure along a weak plane, and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally towards the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free. Generally, failure in this mode is analytically unpredictable, since it is difficult to determine where the first tension crack will occur.

As depicted on Figure 1, there are no creeks or open bodies of water within an appropriate distance from the site, in our opinion, for lateral spreading to occur on the site. For this reason, the probability of lateral spreading occurring at the site during a seismic event is low.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions and Recommendations Summary

From a geotechnical engineering viewpoint the proposed two-story wood frame building and parking lot may be constructed as planned, in our opinion, provided the design is performed in accordance with the recommendations presented in this report. There are two foundation alternatives available for a lightly loaded two-story wood frame building as follows:

Conventional Shallow Spread Footings: A relatively ductile and lightweight two-story wood-frame building could be constructed on shallow spread footings. Native site soils and newly placed properly recompacted fill would provide adequate support for such a building in static conditions and during small to moderate earthquakes of short duration. However, during large magnitude local earthquakes, there is a potential for damaging liquefaction induced settlement at the site ranging from ¾- to 1¾-inch. Although the impact of such differential settlement on the structure should be evaluated by the Structural Engineer (SE), for most two-story wood-frame structures designed in accordance with the 2001 California Building Code (CBC), without a "soft story," structural collapse is unlikely, but some damage is probable. For this shallow foundation alternative, existing soils should be excavated to a depth of at least 4-feet below existing grade or finish grade, whichever is lower, moisture conditioned, replaced in lifts, and compacted throughout to at least 90 percent relative compaction (ASTM D 1557-00).



Driven 12-inch-square Pre-Cast, Pre-Stressed Concrete Piles: For reinforced concrete or other heavier, more brittle structures, or to mitigate potential damage due to liquefaction, driven 12-inch-square pre-cast, prestressed concrete piles, driven to a depth of 50 feet below existing grade, can be used to support the proposed building. This would mitigate liquefaction induced settlement of the foundation soils. damage to a conventional slab-on-grade may still occur due to a large magnitude earthquake causing liquefaction at the site. Therefore, a structural slab-on-grade supported solely on the driven piles may be required to mitigate the potential for liquefaction-induced slab-on-grade If a structural slab-on-grade is constructed, then the overexcavation and recompaction within the building footprint would not be required.

Detailed recommendations are presented in the following sections of this report.

4.2 Plans, Specifications, and Construction Review

Because subsurface conditions may vary considerably from those predicted by widely spaced test pits and CPTs, and to check that our report recommendations have been properly implemented, we recommend that we be retained to 1) review the final civil and foundation plans and specifications, 2) observe foundation excavation or installation, and 3) observe and test all earthwork. In addition, the assumed and/or actual geotechnical conditions can be greatly affected by the construction process and seasonal weather changes. For these reasons our geotechnical recommendations are contingent upon our firm providing geotechnical observation and testing services during construction.

4.3 Earthwork

- **4.3.1. Clearing and Site Preparation:** The site should be cleared of all surface and subsurface deleterious materials including possibly existing building foundations, slabs, buried utility and irrigation lines, undocumented fills, pavements, debris, designated trees, shrubs, and associated roots. Excavations extending below the planned finished site grades should be cleaned and backfilled with suitable material compacted as recommended in the "Compaction" Section 4.3.5, later in this report. We recommend that we observe and test all backfilling and earthwork.
- **4.3.2. Overexcavations:** All existing fill soils within the proposed building footprint should be excavated down to native soil. This removal excavation



should extend at least 5-feet beyond the outside building perimeter, or a horizontal distance equal to the removal depth below finish grade, whichever is greater. If excavated fill soils meet the requirements in Section 4.3.4 "Material for Fill" below, suitable soils may be reused as engineered fill. In general, the depth of overexcavation below existing or finish grade (whichever is lower), should be as follows:

Table 7. Recommended Fill and Shallow Native Soil Overexcavation

Design Condition	Minimum Depth of Overexcavation (feet)
Asphalt Parking Lot	11/2
Building With Spread Footings	4
Building With Piles and Structural Slab*	Not required within building

*Structural ground floor slab supported solely by piles

The bottom of fill removal excavations below building footprints and pavement areas should be sloped at inclinations no greater than 3:1 (horizontal to vertical) to minimize abrupt variations in fill thickness. All fill should be compacted in accordance with the recommendations for fill presented in Section 4.3.5 "Compaction," later in this report.

- **4.3.3. Subgrade Preparation:** After the site has been properly cleared, stripped, and necessary overexcavations have been made, the exposed surface soils in those areas to receive fill, slabs-on-grade, or pavements should be scarified to a depth of 6 inches, moisture conditioned, and compacted in accordance with the recommendations for fill presented in Section 4.3.5 "Compaction," later in this report. The finished compacted subgrade should be firm and non-yielding under the weight of compaction equipment.
- 4.3.4. Material for Fill: All on-site soils having an organic content of less than 3 percent by weight are suitable for use as fill at the site. In general, fill material should not contain rocks or lumps larger than 3 inches (7.6 cm) in greatest dimension, with no more than 15 percent larger than 2½ inches (6.4 cm). Imported and non-expansive fill material should be predominantly granular with a Plasticity Index of 15 or less, and/or an Expansion Index (EI) of 20 or less.

If desired to reuse asphalt or Portland cement as engineered fill, we recommend that these materials be thoroughly broken down and mixed with



on-site or import soil. In general, recycled asphalt or concrete should be ground or pulverized to particles less than 3 inches (7.6 cm) in greatest dimension, with no more than 25 percent larger than 2½ inches (6.4 cm). Recycled material should be thoroughly mixed with a sufficient amount of soil, such that there is no more than 40 percent by weight of recycled material in the final mix.

We recommend that fill containing recycled asphalt and concrete be placed near the bottom of the proposed fills and/or spread out evenly across the site. Recycled fill should not be used within 2 feet of finished grade in building or roadway areas.

4.3.5. Compaction: All fill, as well as scarified surface soils in those areas to receive fill or slabs-on-grade, should be compacted to at least 90 percent relative compaction as determined by the ASTM D 1557-00 Test Method (modified Proctor). Fill greater than 5 feet in thickness should be compacted to at least 95 percent compaction for the portion below the upper 5 feet. Fill should be placed in lifts no greater than 8 inches in uncompacted thickness at a moisture content near the laboratory optimum. Each successive lift should be firm and non-yielding under the weight of the construction equipment.

The upper 6 inches of subgrade in pavement areas and all aggregate base should be compacted to at least 95 percent relative compaction (ASTM D 1557-00). Aggregate base and all import soils should be compacted at a moisture content near the laboratory optimum.

4.3.6. Trench Backfill: All utility trenches should be backfilled with compacted fill in accordance with Sections 306-1.2 and 306-1.3 of the *Standard Specifications for Public Works Construction*, ("Greenbook"), 2000 Edition. Fill material should be placed in lifts not exceeding 8 inches in uncompacted thickness and should be compacted to at least 90 percent relative compaction (ASTM D 1557-00) by mechanical means only. The upper 6 inches of backfill in all pavement areas should be compacted to at least 95 percent relative compaction.

Where granular backfill is used in trenches, we recommend that a cut-off plug of relatively impermeable siltier material be placed where such trenches enter the building and pavement areas. This would reduce the likelihood of water entering the trenches from the landscaped areas and seeping through the



trench backfill into the building and pavement areas and coming into contact with moisture sensitive subgrade material.

- **4.3.7. Temporary Slopes and Trench Excavations:** The contractor is responsible for all temporary slopes and trenches excavated at the site and the design of any required temporary shoring. Shoring, bracing, and benching should be performed by the contractor in accordance with the 2003 Edition of the *California Construction Safety Orders*, Article 6, or more current.
- **4.3.8. Surface Drainage:** Positive surface gradients should be provided adjacent to the structures to direct surface water away from the foundations and slabs towards suitable discharge facilities. Ponding of surface water should not be allowed on or adjacent to structures, slabs-on-grade, or pavements. Roof runoff should be directed away from foundation and slabs-on-grade.
- **4.3.9. Construction Observation:** Lowney Associates should observe and test all grading and earthwork, to check that the site is properly prepared, the selected fill materials are satisfactory, and that placement and compaction of the fills has been performed in accordance with our recommendations and the project specifications. Sufficient notification to us prior to earthwork is essential. The project plans and specifications should incorporate all recommendations contained in the text of this report.

Variations in site conditions are possible and may be encountered during construction. To confirm correlation between the soil data obtained during our field and laboratory investigations and the actual subsurface conditions encountered during construction and to observe conformance with the plans and specifications, it is essential that we be retained to perform continuous or intermittent review during the earthwork, excavation and foundation construction phases. Therefore, the conclusions and recommendations presented in this report are contingent upon us performing construction observation services.

4.4 Spread Footings

4.4.1. Embedment: If the structure can tolerate some liquefaction induced settlement as discussed in Section 3.3 above, then the proposed building can be supported on conventional continuous and/or isolated spread footings bearing solely on a zone of newly placed properly compacted fill soils at least



4 feet thick (measured from existing or finish grade, whichever is deeper). All footings located adjacent to utility trenches should be embedded below an imaginary 1:1 (horizontal:vertical) plane projected upward and outward from the bottom edge of the trench to the footing. All footings should also have the minimum footing dimensions shown in Table 8 below. Footing depths should be measured from lowest adjacent finished grade, considered as the bottom of interior slab-on-grade or the finished exterior grade, excluding landscape topsoil, whichever is lower.

Table 8. Minimum Footing Dimensions

Number of Stories	Minimum Footing Width (inches)	Minimum Footing Depth (inches)
1	12	18
2	15	18

4.4.2. Allowable Bearing Pressures: Footings constructed in accordance with the above recommendations would be capable of supporting maximum allowable bearing pressures of 2,500 pounds-per-square-foot (psf) for combined dead and live loads. Due to the liquefaction hazard at this site, we do not recommend increasing the allowable bearing pressure for seismic loads, but a one-third increase can be used to resist wind loads. These maximum allowable bearing pressures are net values; the weight of the footing may be neglected for design purposes.

All continuous footings should be reinforced with top and bottom steel to provide structural continuity and to permit spanning of local irregularities. It is essential that we observe the footing excavations before the reinforcing steel is placed.

4.4.3. Settlement Estimates: Structural loads were not available for our review at the time of our investigation. Therefore we assumed typical interior column dead plus live loads on the order of 150 kips and perimeter bearing wall dead plus live load on the order of 4 kips-per-foot of wall, or less. Based on these assumed loads and the maximum allowable bearing pressures recommended above, we estimate that total footing static settlement should be less than approximately ¾-inches, with post-construction differential movement of approximately ½-inch or less in static conditions. Liquefaction induced settlement could be as much as ¾- to 1¾-inch across the site, in addition to the estimated static settlement. We should be retained to review



the final foundation plans and structural loads to verify the above settlement estimates.

4.4.4. Lateral Loads: Lateral loads may be resisted by friction between the footings and the supporting subgrade, and passive resistance of properly compacted backfill in combination. A maximum allowable frictional resistance of 0.35 may be used for design. In addition, lateral resistance may be provided by passive pressures acting against foundations poured neat against competent soil. We recommend that an allowable passive pressure based on an equivalent fluid pressure of 280 pounds-per-cubic-foot (pcf) be used in design, not to exceed 2,500 psf, in any case. These design parameters have already been reduced by a factor-of-safety of 1.5.

4.5 Driven Pre-Stressed Concrete Piles

4.5.1. Driven Pile Vertical Capacities: If heavier, brittle structures, such as reinforced concrete buildings are proposed, or if the liquefaction damage hazard is to be mitigated, then the proposed structure should be supported on driven 12-inch-square pre-cast, pre-stressed concrete piles, driven to a depth of 50 feet below existing grade to derive support from the non-liquefiable soils below the potential liquefaction lenses. Piles should have a minimum center-to-center spacing of at least three feet. Grade beams and pile caps should be designed to span between piles to support bearing walls and columns, respectively.

For preliminary design, a 50-foot long, 12-inch square, driven pile, may be assumed to have a downward static and dynamic capacity of 180 kips. This capacity can be increased by one-third for resistance to wind loads, but should not be increased for seismic load resistance. For this capacity, pile settlement is expected to be less-than ¼-inch to negligible. Resistance to uplift loads will be developed solely as friction along the pile. An uplift capacity of 120 kips can be used. Soil capacities are provided above, which are not necessarily the capacities of the piles as a structural element. Piles should have a minimum center-to-center spacing of at least three pile diameters/widths on center; otherwise a group action reduction in capacity will be required.

4.5.2. Driven Piles Lateral Capacities: Lateral loads exerted on structures supported on piers and grade beams may be resisted by a passive resistance based on an equivalent fluid pressure of 280 pcf acting against the grade beams, pile caps and projected area of the individual pile, with a maximum of



2,500 psf at depth. Due to potential subsidence of the subgrade relative to the piles, sliding resistance should be neglected. Upon request, Lowney Associates can calculate specific pile lateral capacities and moment diagrams based on the stiffness of the pile (EI), pile head fixity, allowable deflection, and applied vertical load.

Pile Driving: We should also observe and document production pile driving, and verify pile capacities based upon actual driving resistance. Unless otherwise required, we will use the Modified ENR pile driving formula to check downward driven pile capacities. It is possible that some pre-stressed concrete pile shafts may have to be pre-drilled prior to driving, to facilitate penetration below the liquefiable lenses down to 50 feet below existing grade. However, for the most part, pile driving is expected to induce localized liquefaction, resulting in relatively easy pile driving in some lenses. To take advantage of this condition, piles should be driven non-stop, to a depth of 50 If pile driving is incomplete for a given pile, pore-pressures may dissipate with time, increasing the pile driving soil resistance. An indicator pile driving program may be prudent for the contractor to evaluate pile driving conditions at this site. We note that all four CPTs reached a depth of 50 feet, with a maximum tip resistance of approximately 270 tons-per-square-foot (tsf) (CPT-3 at 46 feet), with the tip resistance for the most part less than 100 tsf.

4.6 Slabs-on-Grade with Footings

The proposed slab-on-grade floors may be supported directly on newly placed properly compacted fill, prepared in accordance with the recommendations presented in Section 4.3.2 "Overexcavations," in this report. Before slab construction, the subgrade surface should be proof-rolled to provide a smooth, firm surface for slab support. Slab reinforcing should be provided in accordance with the anticipated use and loading of the slab.

We anticipate that moisture sensitive floor coverings such as vinyl tile will be placed on the slab-on-grade in the proposed building. To reduce moisture vapor emissions that may result in delamination and other tile damage, we suggest the following, only for areas where moisture sensitive floor coverings are anticipated:

▼ Vapor Barrier: A 10-mil vapor retarder should be placed directly onto the properly compacted subgrade. If a laser screed or similar equipment is used during concrete placement, a more durable vapor barrier could be



used such as Stego-Wrap $^{\text{m}}$, or equivalent, to reduce the potential for tearing and/or ripping the vapor barrier. Concrete should be allowed to pour out uniformly across this vapor barrier, without a sand layer over the vapor barrier.

- ▼ Concrete: A concrete mix design with a low water to cement ratio (less than 0.5) should be used. Water should not be added to this mix during placement. The concrete should be cured in a manner to eliminate slab curling.
- ▼ Post Curing: Before floor coverings are placed, any bond breaker coating and all other contaminates should be removed from the slab-on-grade surface. Shot blasting the slab surface may be required. Once the building has been enclosed, and environmental controls (heating and air conditioning) are installed and operational, the slab-on-grade should then be tested for moisture vapor emission, in accordance with ASTM E 1907-97.
- ▼ Floor Coverings: We should review the proposed floor covering and adhesive products and placement procedures to be used. Adhesives and coverings should be compatible, and the manufactures requirements should be followed. The tested moisture vapor emission rate (MVER) should be below the specified rate for the floor covering products used (e.g. MVER<5), before the product is placed. Expansion gaps should be provided where floor tiles are placed adjacent walls under molding, and along appropriate grids for large expanses of tile. Carpet strips or expansion joint flashing plates can be used in open areas at these joints.

4.7 Pavements

4.7.1. Asphalt Concrete: We obtained a representative bulk sample of the surface soil from the parking area and performed an R-value test to provide data for pavement design. The results of the test are included in Appendix B and indicate an R-value of 45. However, because surface soils vary across the site, we judged an R-value of 35 to be applicable for design. Using estimated traffic indices for various pavement-loading requirements, we developed the following recommended pavement sections using Caltrans Highway Design Manual, presented in Table 9, below.



General **Asphalt** Design Aggregate Total Traffic Traffic Concrete Thickness Base Condition Index (TI) (inches) (inches) (inches) 4.0 2.5 4.0 Automobile 6.5 Parking 4.5 2.5 5.0 7.5 5.0 3.0 Automobile 5.0 8.0 Parking Lanes 5.5 3.0 6.0 9.0 6.0 3.5 7.0 Truck Access & 10.5 Parking Areas 6.5 4.0 7.0 11.0

Table 9. Recommended Asphalt Concrete Pavement Design Alternatives

Design R-Value = 35

The traffic indices used in our pavement design are considered reasonable values for the proposed development and should provide a pavement life of approximately 20 years with a normal amount of flexible pavement maintenance. The traffic parameters used for design were selected based on engineering judgment and not on information furnished to us such as an equivalent wheel load analysis or a traffic study.

4.7.2. Asphalt Concrete, Aggregate Base and Subgrade: Asphalt concrete and aggregate base should conform to Caltrans Standard Specifications (July 1995 Edition) Sections 39 and 26-1.02A, respectively. As an alternative, asphalt concrete can conform to Section 203-6 of the Standard Specifications for Public Works Construction (Green Book), 2000 Edition. Crushed aggregate base or crushed miscellaneous base can conform to Sections 200-2.2 and 200-2.4 of the Standard Specifications for Public Works Construction (Green Book), 2000 Edition, respectively. Pavement subgrades should be compacted to 90 percent and pavement base should be compacted to 95 percent of the ASTM D 1557-00 laboratory maximum density for these materials.





^{*}Caltrans Class 2 aggregate base; minimum R-value equal to 78.

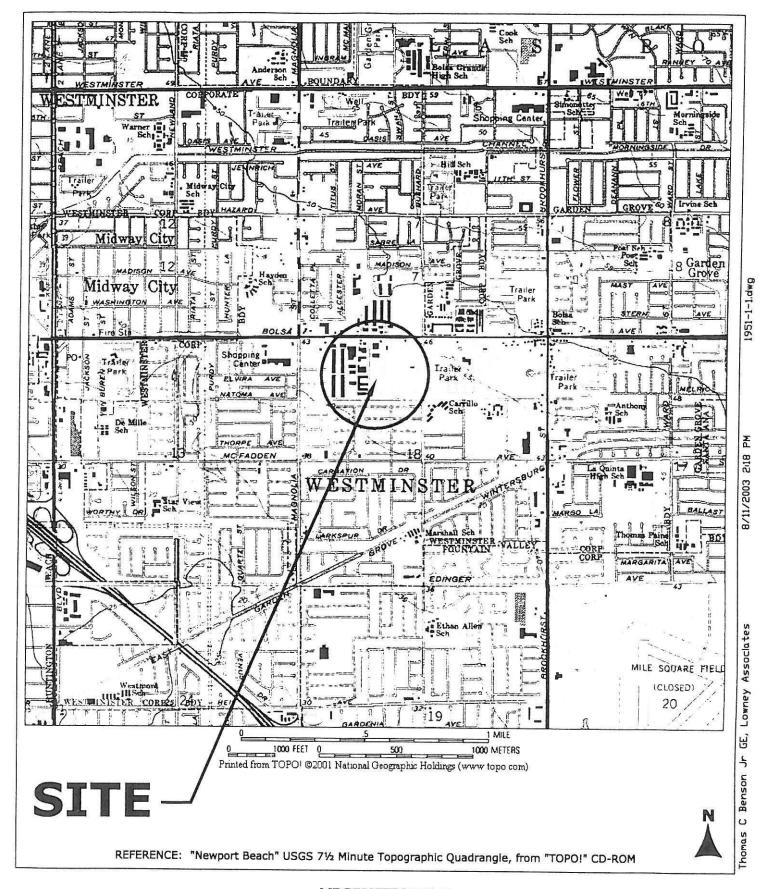
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VICINITY MAP

ASIAN GARDEN DEVELOPMENT Westminster, California



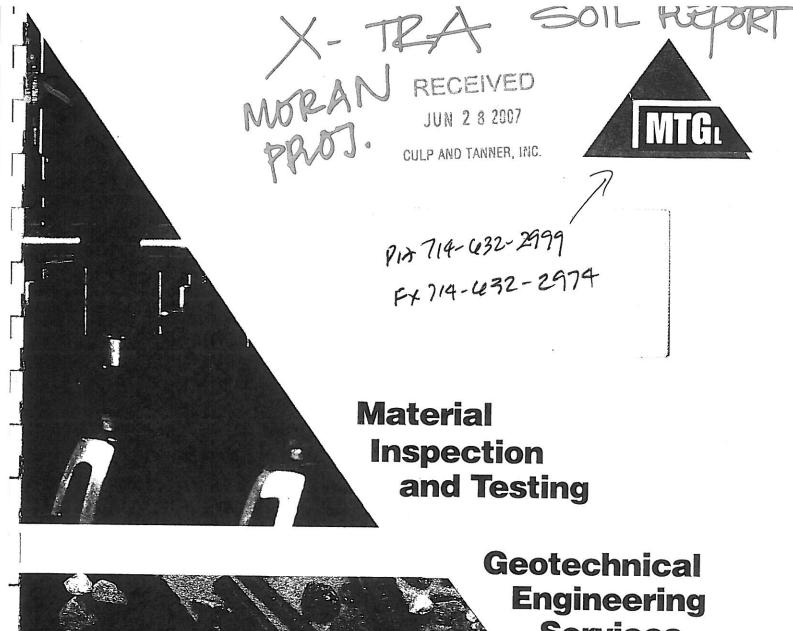
Appendix C Supplemental Geotechnical Investigation

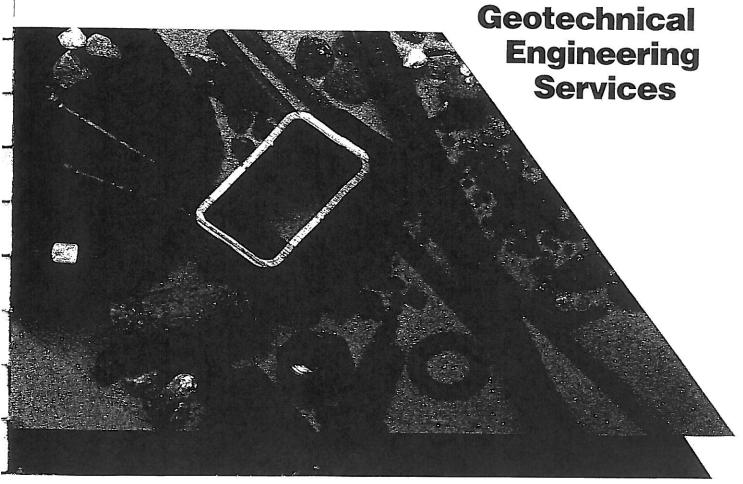


Appendix

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The Planning Center April 2010





SUPPLEMENTAL GEOTECHNICAL INVESTIGATION

Proposed Moran Senior Condominiums

Moran Street and Bishop Place

Westminster, California

Prepared For:

Bridgecreek Development 8907 Warner Avenue, Suite 108 Huntington Beach, California 92647

Prepared By:

MTGL, Inc. 2992 La Palma, Suite A Anaheim, California 92806

Project No. 3157-A01 Log No. 04-1445

December 1, 2004

December 1, 2004

Bridgecreek Development 8907 Warner Avenue, Suite 108 Huntington Beach, California 92647 Project No. 3157-A01 Log No. 04-1445

Attention:

Mr. Mo Zahrawi

SUBJECT:

SUPPLEMENMTAL GEOTECHNICAL INVESTIGATION

Proposed Moran Senior Condominiums

Moran Street and Bishop Place

Westminster, California

In accordance with your request and authorization we have completed a Supplemental Geotechnical Investigation at the subject site. This investigation is to supplement information obtained in the previous investigation performed by Lowney Associates, (2003). We are pleased to present the following report with our conclusions and recommendations for remedial grading and foundations.

Submit Copy of This Soil Report

We anticipate the foundation loading of 50 to 75 kips for pad footings and 2 to 5 kips for perimeter footings. If expected loads exceed these ranges we should be consulted for additional foundation recommendations. Our report concludes that the site is suitable for construction if the recommendations presented are incorporated into the plans and specifications for the proposed construction.

Due to the soft and loose nature of the near surface soils and the high ground water table, we have investigated 3 foundation types for considerations; deep foundations (driven pre-cast pre-stressed concrete piles and cast in place concrete piles), and a conventional shallow foundation with ground improvement. Design recommendations for the deep foundation are included within the text. The conventional shallow foundation would require ground improvement of the upper soil layers with stone columns, pressure grouting or other proprietary improvements such as mini-piles. The conventional method of over excavation and replacement with engineered fill is not recommended due to the high groundwater table and dewatering requirements.

Page ii

REVISE SOIL REPORT AS PER DESIGNI LOADS BY CLUP AND TANNER. We look forward to providing additional consulting services during the planning and construction of the project.

If you have any questions concerning our report or planned construction please contact our office.

Respectfully submitted,

MTGL, Inc.

M. B. (Ben) Lo

Chief Geotechnical Engineer R.G.E. 2088

Expiration Date: December 31, 2005

Gary D. Johnpeer

Certified Engineering Geologist CEG 1118

Distribution (2) Addressee

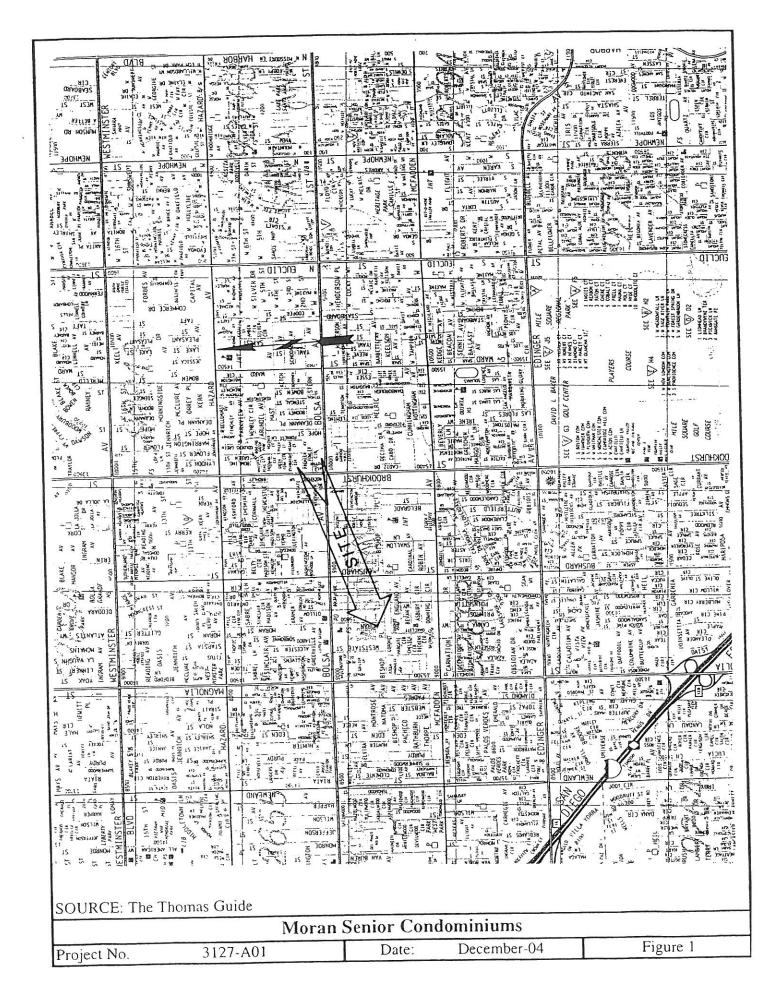




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INTRODUCTION

In accordance with your request and authorization, MTGL, Inc. has completed a Supplemental Geotechnical Investigation for the subject site. This investigation is to supplement information previously obtained by Lowney Associates, (2003). The following report presents our findings, conclusions and recommendations based on our investigation, laboratory testing, and engineering review.

PLANNED CONSTRUCTION

It is proposed to construct a condominium complex consisting of one underground parking level and four levels of residential units. The previous investigation by Lowney Associates was conducted for the development of a two-story wood frame building and associated parking lot at grade. See the Boring Location Plan for approximate location of the planned construction.

SCOPE

The scope of our Geotechnical services included the following:

- Complete ten excavations to obtain subsurface conditions; field sampling for Standard Penetration testing, and sampling for laboratory testing.
- Laboratory testing of samples (See Appendix C).
- Geotechnical engineering review of data and engineering recommendations.
- Preparation of this report summarizing our findings and presenting our conclusions and recommendations for the proposed construction.

SITE

The site is located on the northeast corner of Moran Street and Bishop Place in Westminster, California. The site is currently undeveloped, with approximately two to four inches thick gravel layer at the surface of the northern portion of the site.

FINDINGS

Geotechnical Conditions

In general, the borings went through approximately 2 to 4 feet of fill soils and then into the interlayered silt, silty sand and sandy silt that was found to be moist to wet and loose to medium stiff with depth and saturated at the water table. Groundwater was encountered at a minimum depth of 4 feet.

Laboratory Testing

The laboratory testing includes moisture density of the undisturbed samples and moisture content of the disturbed samples. The maximum density was determined on samples of the near surface soils for shrinkage and remolded direct shear. The minus #200 screen fractions were determined for liquefaction analysis. Direct shear and consolidation testing was accomplished for foundation bearing and settlement determinations. Corrosivity, Expansion Index and Soluble Sulfates in the near surface soils were determined for slab-on-grade and concrete recommendations. R-value testing was completed for hardscape and pavement recommendations. The results and expanded explanation of laboratory testing are presented in Appendix C.

GEOLOGY

Regional Geologic Conditions

The site lies in an area identified as the Central Block of the Peninsular Ranges geomorphic province of California (Yerkes and others, 1965). The site is approximately 5.5 miles inland from the shore of the Pacific Ocean at an elevation of approximately 52 feet above mean sea level (USGS, 1972). According to Yerkes and others (1965), the Peninsular Ranges province has an elongated series of mountainous

ridges and peaks rising in places to altitudes of more than 10,000 feet above sea level. The province extends southwestward about 900 miles from near Los Angeles to the tip of Baja California. The largest part of the Peninsular Ranges province, the continental borderland, is submerged beneath the Pacific Ocean. The exposed part of the province is 55 to 80 miles wide. It has been uplifted, tilted seaward, and sliced longitudinally into subparallel blocks by young steeply dipping northwest-trending fault zones such as the Newport Inglewood fault zone. Basement rocks of the province are overlain by marine and nonmarine clastic strata of Late Cretaceous or Cenozoic age up to about 32,000 feet thick. In the site vicinity, the basin is floored by younger Cenozoic strata and is the site of active sedimentation (Jahns, 1954).

The central structural block is about 55 miles long from the Santa Monica Mountains at the northwest to and including the San Joaquin Hills at the southeast, and widens from about 10 miles at the northwest to more than 20 miles at the southeast.

Physiographic features of the central block include: the aggraded central lowland plain; the low Elysian hills, parts of the Repetto Hills; the elongated east-trending Coyote hills; the La Habra Valley, the Santa Ana Mountains, and the San Joaquin Hills. The overlying rocks of the central block are best exposed on the west slopes of the Santa Ana Mountains and consist of marine and nonmarine clastic sedimentary rocks of Late Cretaceous through Pleistocene age and interbedded volcanic rocks of middle Miocene age. The dominant structural feature of the central block is the northwest trending, doubly plunging synclinal trough underlying its central part. The southwest flank of the synclinal trough rises steeply to the sub-sea depth of about 14,000 feet along the Newport Inglewood zone, but its northeast flank rises to merge with a broad, gently sloping shelf that has an average depth of about 15,000 feet sub-sea, and that is complicated by several subsidiary folds and faults.

According to Fife, 1974, Mesozoic crystalline and sedimentary rocks of the Peninsular

Ranges Province underlie the site region at depth. In the adjacent Santa Ana Mountains to the north and east of the site, these older, slightly metamorphosed epiclastic and volcanic rocks consist of the Jurassic Bedford Canyon Formation and Santiago Peak Volcanics. Non-conformably overlying these older rocks are several thousand feet of upper Cretaceous sandstone, siltstone and conglomerate of the Trabuco, Ladd and Williams Formations. Overlying the upper Cretaceous sedimentary rocks are younger rocks of Cenozoic age with a composite thickness of greater than 20,000 feet in the 15-mile-wide strip between the Santa Ana Mountains and the coast.

Seismicity and Earthquakes

The site is located within the seismically active area of southern California. Seismic risk is considered relatively high as compared to other areas of southern California, mainly because of the relatively active faults. The Newport Inglewood fault zone is located approximately 5-miles to the southwest and the active Whittier fault zone is located approximately 16-miles north. Other known active and potentially active faults also occur within the immediate site vicinity. However, the California Division of Mines and Geology publishes geologic reports and fault maps showing active and potentially active faults in California. According to these maps, the site is not included in any of the mapped Alquist-Priolo Special Studies Zones (CDMG, 1997) and the site is not crossed by any known active faults. The nearest active fault is the Newport Inglewood fault to the southwest.

Given a strong earthquake event on the Newport Inglewood fault, or on any of a number of other active or potentially active faults in the site region, strong to very strong ground shaking should be expected. However, because no known active faults traverse the site, the potential for future ground rupture at the site is considered low.

Site Geologic Conditions

Site conditions were evaluated based in part on the findings of the ten hollow stem auger borings which were advanced to depths ranging from 26 to 71.5 feet below existing grade. The boring locations were located on an aerial photographs of the site and each boring location was also located with a Magellan 330 hand-held GPS unit as shown on the following table.

Boring Locations and Depths			
Boring #	Boring Location Boring Depth (ft.)		
B1	33.74297 ⁰ N 117.96680 ⁰ W	51.5	
B2	33.74216 ⁰ N 117.96705 ⁰ W	51.5	
В3	33.74214 ⁰ N 117.96679 ⁰ W	71.5	
B4	33.74265 ⁰ N 117.96685 ⁰ W	36.5	
B5	33.74326 ⁰ N 117.96703 ⁰ W	36.5	
В6	33.74348 ⁰ N 117.96686 ⁰ W	36.5	
В7	33.74158 ⁰ N 117.96685 ⁰ W	26.5	
В8	33.74349 ⁰ N 117.96672 ⁰ W	36.5	
B9	33.74160 ⁰ N 117.96699 ⁰ W	25.5	
B10	33.74274 ⁰ N 117.96696 ⁰ W	36.5	

Approximately 2 to 4 feet of artificial fill, generally consisting of moist, medium dense silty sand covers the site. Native soil, consisting of medium dense to dense silty to clean sands interbedded with fine grained soil consisting of moist to wet and stiff to hard silt and clay underlies the artificial soil. According to the geologic map of

Orange County (Morton and Miller, 1981), these native soils consist of Holocene age alluvium and colluvium.

Groundwater

According to CDMG (2001), historic high groundwater levels in the immediate site vicinity are generally less than five (5) feet below grade. This is consistent with the findings of the ten borings which each encountered groundwater. Measured groundwater depths at the time of drilling were approximately five (4) to six (6) feet below existing grade. However, it is noted that the site investigation was conducted at the end of summer following a prolonged period of very little rainfall. Thus, a future groundwater depths on the order of less than five (5) feet below grade seems reasonable and should be anticipated in the foundation designs for the site.

Slope Stability

Topographically, the site slopes approximately 13 feet per mile toward the southwest. Thus, slope stability is not a concern at this very gently sloping site. However, provisions will need to be implemented to direct surface flow from the site during heavy rainfall events. Site development should incorporate provisions to direct surface flow (sheetwash) toward approved drainage devices which should be maintained.

Liquefaction Hazard

The seismic hazard zone map of the Newport Beach Quadrangle (DMG, 1998) identifies the site as an area where permanent ground displacement could occur due to

liquefaction. Given the presence of shallow groundwater and near-surface saturated sand and silty sand layers the liquefaction potential was evaluated for the site (see below).

Tsunami Hazard

Given the inland location of the site (5.5 miles from the ocean) and the site elevation (approximately 53 feet above sea level), the tsunami potential is considered nil. There

potential for seiche is also considered ni.

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GEOLOGIC SUMMARY AND CONCLUSIONS

Given the findings of the investigation, it appears that the site geology is suitable for the proposed construction. Based on the investigation, it is our opinion that the proposed development is safe against landslides and ground rupture from active faults. Grading and construction of the proposed project will not adversely affect the geologic stability of adjacent properties. The nature and extent of the investigation conducted for the purposes of this declaration are, in our opinion, in conformance with generally accepted practice in this area. Therefore, the proposed project appears to be feasible from a geologic standpoint. There appears to be no significant geologic constraint onsite that cannot be mitigated by proper planning, design, and sound construction practices. Specific conclusions pertaining to geologic conditions are summarized below:

Due to proximity of the site to regional active and potentially active faults, the site could experience moderate to high levels of ground shaking from regional seismic events within the projected life of the building. A design performed in accordance

with the current California Building Code and the seismic design parameters of the Structural Engineers Association of California is expected to satisfactorily mitigate the effects of future ground shaking.

- The potential for active (on-site) faulting or landslides is considered low.
- Liquefaction, the process by which water-saturated sediment loses strength and may fail during strong ground shaking, commonly accompanies moderate to great earthquakes throughout the world. Water-saturated, cohesionless, granular sediment situated at depths less than 50 feet beneath the surface constitutes the principal environs of the liquefaction process. This site is within a potentially liquefiable zone on the State of California Seismic Hazards Map. A liquefaction assessment was completed for boring B-2 using current standards and California Special Publication 117.

The liquefaction study (Appendix D) concludes that there are sand layers (4 to 13 ft. and 28 to 33 ft.) that may liquefy during the life of the project due to the design earthquake. Liquefaction of the zone would cause up to 3.4 inches of settlement. Due to relatively level nature of the subgrade this settlement is expected to produce a maximum of 1.7 inches of differential settlement. Most of the settlement would be eliminated if the structures are supported with pile foundations and/or resting on improved ground as recommended in this report.

The computer program EQFAULT was used to evaluate ground acceleration potential at the site. Based on the results, it appears that a peak ground acceleration of 0.29 g would be produced from the maximum earthquake magnitude (Mw) of 6.9 on the Newport-Inglewood Fault.

The fault type is B, the soil profile type is Sp and the distance to the nearest active fault is 7.6 kilometers.

The computer program FRISKSP (Thomas F. Blake, 2000) was used to calculate the site accelerations using the probabilistic method. See Appendix for results. The

Design-Basis Earthquake ground-motion (10% chance of excedance in 50 years) is 0.35 g.

The computer program UBSEIS (Thomas F. Blake, 2000) was used to calculate the UBC seismic factors. The results are located in the Appendix. The site soil profile is S_D . The nearest active fault is the Newport-Inglewood Fault, which is located approximately 7.6 kilometers away. The fault type is B. Selected UBC seismic coefficients are: Na = 1.0, Nv = 1.1, Ca = 0.44 and Cv = 0.70.

Seismic Induced Settlement

The potential for settlement due to ground shaking is considered to be low if the recommendations in this report are adhered to.

CONCLUSIONS

General Conclusions

Based on our Geotechnical review of the planned construction, it is our opinion that the site is suitable for the proposed construction provided our conclusions are taken into consideration during design, and our recommendations are incorporated into the construction plans and specifications and implemented during grading and construction.

Excavation Characteristics/Shrinkage

Excavation should be relatively easy with conventional earth moving equipment. Shrinkage of the undocumented fill and the native alluvial materials are expected to range from 5 to 15 percent.

Settlement Considerations

Maximum long-term settlement for the pile supported footings is expected to be on the order of ½ inch. Total differential settlement should not exceed ¼ inch over a horizontal distance of 25 feet. The magnitude of settlement for shallow footings

resting on the improved ground would depend on the type of improvement to be implemented, however should be within one inch and ½ inch respectively for total and differential settlements.

Site Coefficient/Subgrade Modulus

The Subgrade Modulus may be taken as 100 psi per inch. In compliance with the 1998 California Building Code the site is Type S_D and the Seismic Coefficients and Spectrum presented in Appendix D may be used.

RECOMMENDATIONS

Our recommendations are based on data obtained from the previous investigation report dated August 11, 2003 and data obtained during this Supplemental Geotechnical Investigation. Our recommendations are considered minimum and may be superseded by more conservative requirements of the architect, structural engineer, building code, or governing agencies. The foundation recommendations are based on the expansion index and shear strength of the onsite soils. Import soils, if necessary should not exceed the existing expansion potential and should be approved by the Geotechnical Engineer prior to importing to the site. In addition to the recommendations in this section, additional general earthwork and grading specifications are included in Appendix E.

Site Grading Recommendations

General Compaction Standard: All fills should be compacted to at least 90 percent of maximum dry density as determined by ASTM Test Method D1557-91. Fill materials should be placed in loose lifts, not thicker than 8 inches. Material should be moisture-conditioned as processed as necessary to achieve a uniform moisture content that is over optimum and within moisture limits required to achieve adequate bonding between lifts and compaction.

Ground Improvement

Due to high ground water table encountered and dewatering requirement, the

conventional method of over excavation and replacement with engineered fill is not recommended. Conventional shallow footings could be considered if the upper 30 feet of the ground is improved using techniques such as stone columns or pressure We recommend specialty contractors to be consulted for ground improvement.

Spread Footings and Mat foundations PEOU'REMENTS

If the near surface ground is appropriately improved, conventional spread footings could be designed using the allowable bearing pressure of 2,000 psf.. foundation could also be constructed on the improved ground to support the structures. A modulus of subgrade reaction of 100 psi per inch could be used for the mat foundation design.

Drilled Cast-in-Place Piles

The proposed structures could also be supported with cast-in-place bored piles. Based on the Su and relatively stiff materials in the subgrade the axial capacity and uplift resistance as shown on Figures 3 and 4 have been calculated for the minimum 20-foot pile embedment to an embedment of 50 feet. The allowable loads reflect a minimum factor of safety of 2.0 and include any induced downdrag due to liquefaction. The uplift capacities include the weight of the pile but not the pile cap.

SITE SPECIFIC. NEAR SURFACE IMPROVEMENT SITE SPECIFIC. NEAR SURFACE IMPROVEMENT CRITICAL. DETAILS OF SIZE AND SPACING OF STONE COLUMNS OR DEPTH OF PRESSURE GROWTING. ALSO SPECIFY MIN. DEPTH GROWTING. BELOW FINISH GRADE OR SLAB ON GRADE. GEOTECHINICAL ENGR. TO RECOMMEND

Allowable Axial Capacity

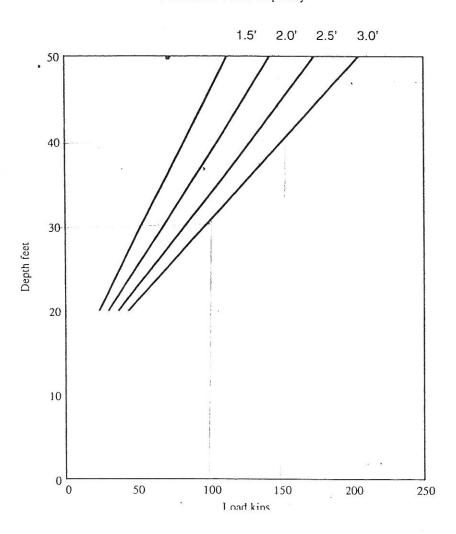


Figure 3

Allowable Uplift Capacity

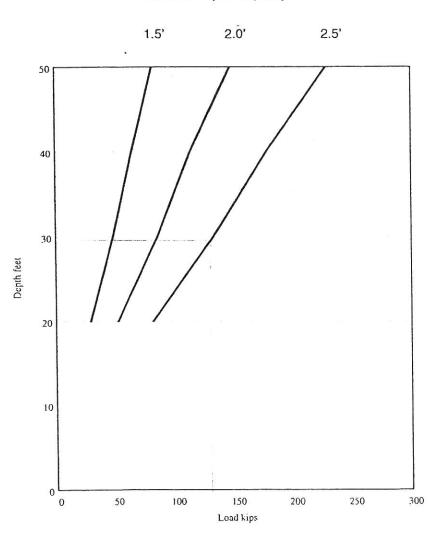


Figure 4

The allowable lateral loads were calculated for assumed maximum deflections by using the subgrade reaction approach for noncohesive soils with and average Standard Penetration of approximately 15 for the relatively dense subgrade. The minimum embedment for the 18, 24, 30, and 36 inch diameter is 20, 25, 30, and 40 feet respectively. The following table is for a fixed head pile.

Assumed	Allowable Lat	Allowable Lateral Load Capacity Fixed Head Condition			
Deflection	18 inch	24 inch	30 inch	36 inch	
Beneetion	Diameter	Diameter	Diameter	Diameter	
1/2 inch	18 kips	29 kips	57 kips	71 kips	

This table presents the allowable loading for a free head pile.

Assumed	Allowable Lat	Allowable Lateral Load Capacity Free Head Condition			
Deflection	18 inch Diameter	24 inch Diameter	30 inch Diameter	36 inch Diameter	
1/2 inch	12 kips	20 kips	38 kips	48 kips	

For a partially fixed head condition the lateral capacity may be obtained by estimating the percent of fixity for the head and using this percentage to multiply the difference in the allowable loads and adding this to the allowable load for the free head condition.

Due the high ground water table and the presence of loose sand layers, we recommend that casings to be used in the pile construction and that the concrete to be place with tremie method.

Driven Prestressed Concrete Piles

Alternatively, 12 and 16-inch square precast prestressed concrete piles, driven to 60 feet could develop a vertical capacity of 140 and 185 kips and lateral loads of 34 and 50 kips respectively.

Slab-on-grade Recommendations

The recommended minimum slab-on-grade should be a nominal 5-inch slab reinforced with #3 reinforcing bars on 24-inch centers in both directions. A thicker slab with

heavier reinforcement may be required based upon the proposed loading conditions in the structure.

If pile foundation is considered for the structure support, we recommend structural slab to be used in place of slab-on-grade. The structural slab should be reinforced in accordance with the design loads.

Where moisture sensitive flooring is anticipated the placement of an impervious membrane with 2 inches of free draining sand placed above and below the membrane is recommended. The membrane as a minimum should be 10-mil visqueen.

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If pile foundation is considered for the structure support, we recommend structural slab to be used in place of slab-on-grade. The structural slab should be reinforced in accordance with the design loads.

Where moisture sensitive flooring is anticipated the placement of an impervious membrane with 2 inches of free draining sand placed above and below the membrane is recommended. The membrane as a minimum should be 10-mil visqueen.

Retaining Walls

Embedded structural walls should be designed for lateral earth pressures exerted on them. The magnitude of these pressures depends on the amount of deformation that the wall can yield under load. If the wall can yield enough to mobilize the full shear strength of the soil, it can be designed for "active" pressure. If the wall cannot yield under the applied load, the shear strength of the soil cannot be mobilized and the earth pressure will be higher. Such walls as basement and swimming pools should be

designed for the "at rest" conditions. If a structure moves toward the soils, the resulting resistance developed by the soil is the "passive" resistance.

For design purposes, the recommended equivalent fluid pressure for each case for walls founded above the static ground water table and backfilled with nonexpansive soils is provided below. Retaining wall backfill should be compacted to at least 90 percent relative compaction (based on ASTM Test Method D1557-91). Recommended pressures are shown on Table 1.

Table 1.

Equivalent Fluid Weight (pcf)			
Condition	Level	2:1 (H:V) Slope	
Active	35	65	
At-Rest	· 45	90	
Passive	300 (Maximum of 3 ksf)	140 (Sloping Down)	

It is recommended that the footings be embedded at least 24 inches below lowest adjacent finish grade. In addition, the wall footings should be designed and reinforced with structural considerations. For walls less than 15 feet in height, the back cut should be flattened to a gradient of not steeper and 1:1(H: V) slope inclination.

Soil resistance developed against lateral structural movement can be obtained from the passive pressure value provided above. Further, for sliding resistance, a friction coefficient of 0.35 may be used at the concrete and soil interface. In combining the total lateral resistance, either the passive pressure or the friction of resistance should be reduced by 50 percent. In addition, the lateral passive resistance is taken into account only if it is ensured that the soil against embedded structures will remain intact with time.

The walls may be drained by a vertical layer of Miradrain 6200 with Mirafi 140

Geofabric, or equivalent, placed at the back of the wall; or by a minimum 12-inch width of 3/4 inch open-graded crushed gravel enveloped in Mirafi 140 Geofabric. Subdrains should consist of 4-inch diameter Schedule 40, PVC pipe or equivalent, embedded in approximately 1 ft³/linear foot of 3/4-inch down open-graded gravel, enveloped in Mirafi 140 Geofabric Filter or equivalent, with the pipe being 3± inches above the trench bottom; a gradient of at least 1% being provided to the pipe and trench bottom; discharging into suitably protected outlets. Alternatively low retaining walls (less than 5 feet retained) may use weep holes. The Factor of Safety used in calculating the above fluid pressures and coefficient is 1.5.

For retaining walls / basement walls constructed below ground water table, static water pressure should be added to the earth pressure recommended above. Furthermore, basement walls below the ground water table should be water proofed.

Pavement Recommendations

We have assumed a Traffic Index of 6 for truck access, 5 for access drives and 4 for parking areas. Based on an R-Value of 13, we recommend the following pavement sections:

Pavement Area	AC Thickness	Base Thickness
Parking Areas	3 inches	5.5 inches
Driveways	3 inches	8.5 inches
Truck Access	4 inches	10 inches
Concrete Paving	7 inches	Compacted Soil

Base for paving should be compacted to 95 percent of maximum in accordance with the overexcavation section. Minimum reinforcing should be considered for the concrete and the concrete should be placed on subgrade compacted to 90 percent of ASTM D 1557.

Upon completion of the site grading, the near surface material in the driveways and parking areas should be tested for its R-values. The recommended pavement thickness

should be modified if necessary in accordance with the R-values obtained following site grading.

SITE RECOMMENDATIONS

Corrosivity and the On-Site Soils

Based on testing and our experience, concrete in contact with the on-site soils may utilize type II Cement due to low soluble sulfates. The onsite soils are corrosive to underground metal pipes and structures. We recommend that corrosion engineers to be consulted.

Prewetting Recommendation

Due to the low expansion potential of the onsite soils, the soils underlying the slab-ongrade should be prewetted only to prevent water loss in the concrete foundations and slabs.

Dewatering Requirements

Due to the high ground water table, dewatering may be required during excavation and construction for the underground parking structure. We recommend that a well point system to be designed and installed by a specialty contractor for dewatering.

Site Drainage

The site should be graded to provide for positive drainage away from structures in accordance with the building code and applicable local requirements. Unpaved areas of graded pads should slope no less than 2% away from structures. Paved areas of graded pads should slope no less than 1% away from structures. Concentrated roof

and surface drainage from the site should be collected in engineered, non-erosive drainage devices and conducted to a safe point of discharge. The site drainage should be designed by a civil engineer.

Geotechnical Observation/Testing of Earthwork Operations

The recommendations provided in this report are based on preliminary design information and subsurface conditions as interpreted from the investigation. Our preliminary conclusion and recommendations should be reviewed and verified during site grading, and revised accordingly if exposed Geotechnical conditions vary from our preliminary findings and interpretations. The Geotechnical consultant should perform Geotechnical observation and testing during the following phases of grading and construction:

- During site grading and overexcavation.
- During foundation excavation and placement.
- Upon completion of any foundation and retaining wall footing excavation prior to placing concrete.
- During excavation and backfilling of all utility trenches
- During processing and compaction of the subgrade for the access and parking areas and prior to construction of pavement sections.
- When any unusual or unexpected Geotechnical conditions are encountered during any phase of construction.

LIMITATIONS

The analyses, conclusions, and recommendations contained in this report are based on site conditions as they existed at the time of our investigation and further assume the explorations to be representative of the subsurface conditions throughout the site. If different subsurface conditions are observed during construction, we should be promptly notified for review and reconsideration of our recommendations.

Moran Senior Condominiums Westminster, CA

This report was prepared for the exclusive use and benefit of the owner, architect, and engineer for evaluating the design of the facilities as it relates to geotechnical aspects. It should be made available to prospective contractors for information on factual data only, and not as a warranty of subsurface conditions included in this report.

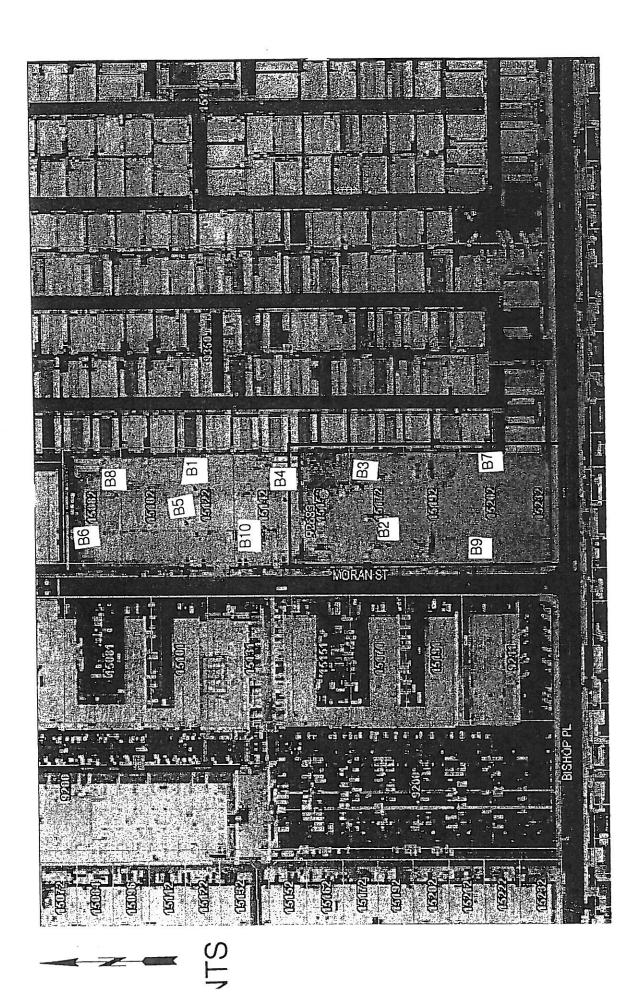
Our investigation was performed using the standard of care and level of skill ordinarily exercised under similar circumstances by reputable soil engineers and geologists currently practicing in this or similar localities. No other warranty, express or implied, is made as to the conclusions and professional advice included in this report

APPENDIX A

REFERENCES

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APPENDIX B

FIELD EXPLORATION PROGRAM

The subsurface conditions for this Updated Geotechnical Investigation were explored by excavating 10 borings with an 8-inch hollow-stem-auger to a maximum depth of 58 feet below existing grade. All drive samples were obtained by SPT or California Tube Sampler. The approximate locations of the borings are shown on the Boring Location Plan, Figure 2, attached. The field exploration was performed under the supervision of our Geologist who maintained a continuous log of the subsurface soils encountered and obtained samples for laboratory testing.

Subsurface conditions are summarized on the Logs of Borings. The soils encountered were classified in general accordance with the Unified Soil Classification System (see Key to Logs, Figure B-0).

The boring was located in the field by pacing and measuring, working from appropriate locations on a map.

The soils were classified based on field observations and laboratory tests.

The borings were backfilled with cuttings, compacted, and patched where appropriate.